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APPENDICES

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Company Profile

For more than 40 years, Tetra Tech Inc. (Tetra Tech) has provided turnkey environmental services to federal, state, and local government and commercial industries that contribute to managing and redeveloping lands. These services have been provided to property owners, prospective buyers, investors, lenders, environmental insurers, and municipalities. Tetra Tech performs cost-effective and timely investigation, remediation, and regulatory activities necessary to achieve the goals of our clients on both small and large scale projects impacted from past use. Tetra Tech can work with you and your development plans to determine the best approach for cleanup and, in many instances, conduct investigation and cleanup concurrent with site development.

Tetra Tech has been contracted by the U.S. Navy since 1997 to provide a suite of environmental and remedial services to protect the human health and environment at Naval Air Station (NAS) Key West and its former properties. We have executed over $20 million of contracted task orders to assess, investigate, cleanup, restore and reduce the former and current operational areas, properties and land parcels used by the U.S. Navy at NAS Key West. We are consistently ahead of schedule and below-budget on every task order that is issued by the U.S. Navy. Tetra Tech has received contract modifications for most task orders to include additional scope and continuation to project completion due to the budget underruns, our efficiency and technical management. The U.S. Navy has consistently evaluated our performance as either excellent or good and our project managers receive recognition and recommendations on their management of projects.

> *"Contractor has made major strides in improving overall performance goals and meeting time line within budget. The quality of work is produced and executed in a professional manner with minimal errors. Lines of communication between the Navy and contractor POC are responsive to all aspects of the project."*
>
> – NAVFAC SE

Tetra Tech has worked closely with the U.S. Navy to remove or mitigate environmental risks and restore former U.S. Navy properties to potential and current use for the City of Key West. A few examples of our past performance are the investigative work that led to the release of Poinciana Housing Complex to the City of Key West in 2000. Through these actions, additional low-income housing was deeded to the City of Key West. Tetra Tech also performed all the investigative work that led to the release of the Hamaca Hawk Missile Site, which was also deeded to the City of Key West in 2000, and was used to house homeless veterans and now is used for a paintball recreational park. Tetra Tech performed all investigative and remedial actions at the intersection of Caroline and William Streets to determine the impact of a fuel line leak from Trumbo Point Tank Farm and the former Tank Island. Through our work, we were able to clear the site through Florida Department of Environmental Restoration (FDEP) and restore the intersection to operational status.

Tetra Tech performed all the original investigative work at Truman Annex, Trumbo Point, Fleming Key, and Dredgers Key (Sigsbee Annex). It was through this work that several parcels of land (DRMO, Parcel K, Parcel E, Building 136, Buildings 102, 103, and 104, and Building 223) were deeded to the City of Key West; that current environmental sites are being treated or monitored; and that the footprint of NAS Key West is being reduced, thereby adding land and resources to the City of Key West. Through our

gained experience at these parcels of land and sites, we would provide the City of Key West the necessary level of knowledge and the assurance of no conflict of interest with the current remedial work currently being undertaken at Truman Annex, Trumbo Point and Fleming Key.

For 17 years, Tetra Tech has worked diligently to help the U.S. Navy and in part the City of Key West, restore or maintain environmental sites for future use. Tetra Tech has continually been engaged with the City of Key West to provide community outreach, environmental cleanup and sustain the welfare of the citizens of the City of Key West.

Environmental Engineering

Tetra Tech specializes in Environmental Engineering and Coastal Engineering. With significant experience in environmental science and engineering, including assessment of risks to human health and the environment, site investigation and remediation services, and real estate development services as well as permit preparation and preparation of bid and proposal documents.

Our recognized leadership in environmental analysis reflects the combined experience of technical staff with expertise in more than 50 scientific and engineering disciplines. Our reputation has been built on the analytical strength of our environmental reports—we produce technically defensible documentation that stand up to both public and legal scrutiny.

Contaminated Site Investigation and Remediation Services

Based on over 30 years of experience working for government and private clients throughout the State of Florida, Tetra Tech has developed a keen understanding of the contamination problems in the state as well as the regulatory framework for investigation and remediation. On behalf of the FDEP, Tetra Tech has assessed and/or remediated 40+ hazardous waste and drycleaning sites in Florida and brought 25 of these sites to regulatory closure. Under a separate contract with the FDEP, Tetra Tech has completed assessment and remedial activities at 22 sites including 16 Targeted Brownfields Sites and 6 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Investigations. As part of the South Florida Water Management District's (SFWMD) Land Acquisition program, Tetra Tech has assessed and/or implemented corrective action at approximately 20 agricultural properties. We have also assisted the U.S. Army Corps of Engineers (USACE) in assessing 21 Cattle Dipping Vats (CDVs) across the state. Through these and other projects, Tetra Tech has gained a thorough understanding of environmental and geological conditions across the state.

Site History Reviews

Tetra Tech recognizes the complexity of site assessments, where sources and potentially responsible parties may be unknown. We bring the preliminary assessment experience necessary to support the development of a practical assessment approach, including:

- **Record Searches** of federal, state, county, and municipal files can provide useful information in planning site assessments. Information available through record searches relates to past and present zoning; endangered species habitats; environmental site lists; contamination; release reporting; location of public and private supply wells; geophysical logs of local wells and water quality; and previous work performed at the site.

We start a site history review by subcontracting with an environmental database search firm, such as Environmental Data Resources (EDR), to perform a search of their database system for regulatory agency listings typically used for Phase I Environmental Site Assessments in general accordance with the procedures described in the ASTM Standard E-1527-13 for a parcel of commercial real estate with respect to the range of contaminants within the scope of CERCLA (42 U.S.C. §9601) and petroleum products. As such, this search is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35)(B). Information from these databases will be used to assess the potential for recognized environmental conditions (RECs) that may be associated a subject site and adjacent properties. Information available from these searches will be reviewed to assess whether the subject site or adjacent properties are listed and whether there is a potential for the subject site to have been impacted by on or off site land use activities.

In addition, local regulatory agency file reviews are conducted to review the historical land use as depicted by relevant site-specific reports and records, readily available from the subcontracted database search agency (EDR) and County Government Offices. These reports and records may potentially include site investigation reports; permit files, notice of violation files, if any. The information will be used to develop a chronology of events at the site and identify activities that may have potentially impacted the subject property, if they can be readily recognized. This information will also be used to assess the historical activities and operations that may have occurred at the site with regard to potential RECs.

We also conduct reviews to establish prior uses of the property for indications of potential adverse environmental conditions. This task will be accomplished by obtaining available information from the following historical records: historical aerial photographs, Sanborn fire insurance maps, local/city street directories, building department records, and interviews with persons knowledgeable about the site history. Other potential interviewees may include personnel with various County Offices. In addition, Tetra Tech will review available physical setting sources, which may include U.S. Geological 7.5 Minute Topographic maps, available historical aerial photographs, groundwater maps, geologic maps, and soil surveys.

For the past eight years, Tetra Tech has been supporting the FDEP in assessing state-lead CERCLA and Targeted Brownfields Assessment (TBA) sites. Through this experience and direct experience supporting USEPA, we understand the objectives of the CERCLA site screening program is to use Preliminary Assessments (PAs), Site Inspections (SI), Expanded Site Investigations (ESIs), and Hazard Ranking System (HRS) evaluations.

TBA sites have a different focus and objective, as these sites are typically proposed for redevelopment and reuse and the presence of contamination may already be confirmed. The objective of the TBA is to use a Phase I investigation to research the past use of the site and nearby properties to facilitate the planning of a Phase II investigation where environmental samples are collected to define the nature and

extent of contamination. The TBA program also includes an option to complete source removal actions to immediately reduce associated site risks.

Baldwin Park, Orlando

On behalf of private and local government clients, Tetra Tech has been involved in some of the most notable Brownfields projects in the State of Florida. As a member of the Navy-Orlando Partnering Team for the comprehensive planning, investigation, and restoration of the 276 acre Baldwin Park, Tetra Tech was instrumental in the 18-month assessment and remediation project. At the end of the project, this former Naval Training Center was transformed into a vibrant 1,100-acre community of residences, businesses, schools, parks, lakes, and wildlife habitats. At the nation's annual Brownfields Environmental Conference in November 2006, the Baldwin Park Redevelopment Project was selected for the annual Phoenix Award, awarded to projects to recognize outstanding restoration and reuse of blighted industrial properties. During the award ceremony, Baldwin Park was recognized as one of the top two revitalization projects in the entire United States.

Hydrogeological Investigations

Tetra Tech Benefit

Tetra Tech provides outstanding leadership and experience in all aspects of the site investigation process.

- General Site Information
- File Review & Interviews
- Data Collection
- Geophysical Surveys
- Site Reconnaissance
- Database & GIS
- Aerial Photography
- Air Monitoring
- Soil, Sediment, Surface Water, & Groundwater Sampling
- Pathway Analysis & Multi-Media Transport Modeling
- Source Characterization & Release Potential
- Risk-Based Site Prioritization

Tetra Tech recognizes that implementing remediation and receiving Site Rehabilitation Completion Orders (SRCO) is the end goal for all sites and that proper site characterization is the foundation for successful remediation. During site assessments, Tetra Tech will not only focus on the primary goal of defining the nature and extent of contamination, but will also be mindful of collecting information to support secondary goals such as determining the risk of pollutants to receptors, identifying responsible parties, and facilitating remedial design. Our mission during this task is to obtain as much site information as necessary to carry the site through the closure process and to accomplish the characterization task in a cost-effective and timely manner. One of the greatest ways we have found to accomplish this goal is to implement the USEPA's Triad Approach to hazardous waste site characterization, remediation, and closure. The Triad Approach is a three-tier approach consisting of:

Tetra Tech's team of chemists, geologists, environmental scientists, modelers, engineers, and risk assessors collectively works towards development of a project approach and remedial decision making.

- **Systematic Planning** which lays the foundation for technically defensible future activities. Tetra Tech routinely develops Conceptual Site Models (CSMs) as visual representation of the qualitative nature and extent of contamination and the associated

risks. This process identifies stressors (e.g., chemical, physical, or biological) and receptors of potential concern, potential transport mechanisms, and exposure media. The visual representation of these relationships helps us to focus the investigation efforts and tailor future remediation towards mitigating complete exposure pathways. As the characterization efforts progress and new information is made available, the CSM continues to evolve.

- **Dynamic Work Strategies** means that all efforts from initial characterization through remediation and monitoring are flexible enough to adapt to changing conditions. This is a key principle that Tetra Tech is very successful in accomplishing. As a large consulting and engineering firm, we have the resources to assign multi-disciplinary technical teams to our projects. While the initial team composition depends on the expected nature of contamination, Tetra Tech has a broad range of expertise that allows for quick additions to the team to address new contaminants or other unforeseen conditions.
- **Real-Time Measurement Technologies** refers to data collection techniques that allow for real-time decision making. Tetra Tech routinely employs such methods as direct push drilling; soil gas sampling; field screening via Photoionization Detectors (PID), Color-Tec® tubes, or X-ray fluorescence (XRF); and mobile laboratories. In addition, we have found geophysical surveys useful in estimating the magnitude and extent of contamination, Modified Active Gas Sampling (MAGS) for identifying soil source areas, and Membrane Interface Probe (MIP) investigations for targeting discrete intervals for in-situ remediation.

Under the Triad Approach, a significant quantity of data can be produced rather rapidly, which brings forth the need for in-field decision making and close coordination with City staff. Our Project Manager and Deputy Project Manager have strong technical capabilities and management experience that will aid in this process. Our Project Manager will also communicate changing conditions and resulting decisions to the City project manager for input and concurrence.

One site where Tetra Tech has successfully implemented the Triad approach is a former Fire Fighting Training Site at Naval Air Station (NAS) Pensacola, completed for the Navy. We utilized a DPT Geoprobe® rig and mobile lab to complete the vertical and lateral delineation of a Light Non-Aqueous Phase Liquid (LNAPL) and groundwater contamination plume. Groundwater samples were collected at various depths using the DPT rig and analyzed by the mobile lab. Analytical results were uploaded to a web site along with updated mapping and electronic field data recorded on a laptop in the field. The client and Tetra Tech's Project Manager reviewed the web data on a daily basis to discuss the immediate results and focus the field crew to new areas of investigation.

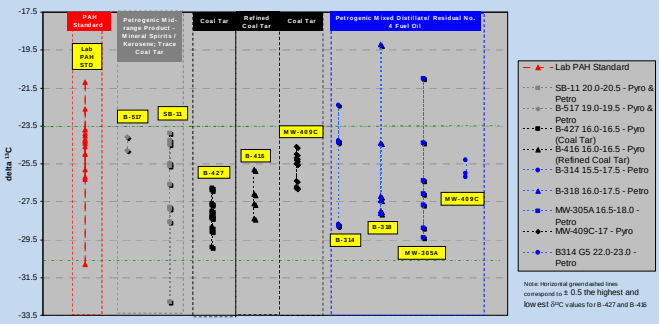
Utilizing the Triad Approach, Tetra Tech saved 8 months from the project schedule and approximately $60,000 at NAS Pensacola by reducing the number of permanent monitoring wells and groundwater samples required.

Tetra Tech personnel are routinely trained in proper sample collection, preservation, transportation, and analysis. Sampling is conducted in accordance with established FDEP Standard Operating Procedures (SOPs) and USEPA guidance. Our field staff are experienced in sampling procedures for a variety of potentially impacted media, such as soil, groundwater, surface water, sediment, biota, and air. Our past experience has also involved assessment of a wide variety of contaminants, including chlorinated

solvents, petroleum hydrocarbons, heavy metals, pesticides, herbicides, radionuclides, munitions and explosives of concern, asbestos, and lead-based paint. Adding to our broad capabilities in sample collection for diverse media, are a variety of sampling techniques that can be combined to evaluate the vertical and horizontal extent of contamination, the type and concentrations of contaminants, soil types, and aquifer characteristics to support remedial design requirements.

- **Innovative Approaches**

One of the greatest innovations Tetra Tech brings to the City is our expertise with environmental forensics. Our experienced group of national experts has extensive experience performing forensic contaminant source evaluation fingerprinting using Compound-Specific Stable Isotope Ratios (CSIR) and advanced hydrocarbon finger-printing techniques. The specificity of these technologies takes contaminant source fingerprinting to the next level that is particularly useful in mixed plumes or complex river/estuarine systems located in highly industrialized areas with multiple point and non-point sources.



Forensic analysis of contaminants and their age assists Tetra Tech scientists in more clearly identifying their sources.

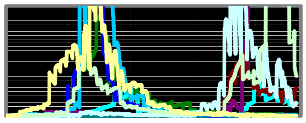
Tetra Tech has been a pioneer in applying these forensic tools and has successfully applied them to numerous projects over the past five years. We are adept at, and have experience in, 1-, 2-, and 3-dimensional CSIR evaluations (one to three isotopes per compound are evaluated) and have been successful at demarcating and assigning to separate Polycyclic Aromatic Hydrocarbon (PAH) sources from distinct petroleum types (i.e., coal tar, fuel oil, kerosene, gasoline). Additionally, we have isolated chlorinated solvent sources at USEPA, Department of Defense (DoD), and private industrial sites. Use of this technique can definitively show and link specific contaminant sources within an environmental matrix versus those originating from other surrounding sources, thus identifying point sources, or providing leverage to apportion responsibilities and/or resolve/mitigate contaminant source issues.

In addition to our expertise with cutting edge environmental forensics, we routinely apply innovative assessment techniques at sites under our current contracts with FDEP. These methods include:

Direct Push Drilling Methods for Rapid Discrete Groundwater and Soil Sampling

Direct push drilling at the former **Concord Cleaners** aided in delineating a groundwater plume suspected of crossing the roadway.

MIP Logging

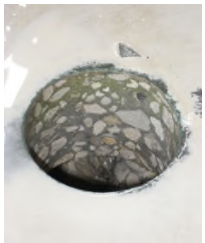


MIP work at the **Dryclean World** site identified two discrete target intervals for groundwater remediation.

Rotosonic Drilling Methods for Assessment in Difficult Geologic Formations

Rotosonic drilling to depths of nearly 400 feet at **Celebrity Cleaners** aided in vertical delineation of a groundwater plume

Hand Augers and Cores through Concrete



Concrete cores at the former **Weekley Lumber** site documented the presence of significant contamination within and underneath the former treatment building - necessitating design & implementation of an IRM.

MAGs Testing for Source Identification

MAGS work being completed at the former **Worth Cleaners** where the machine location was unknown.

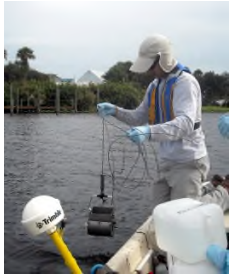
Color-Tec® Field Screening for Organics

Use of Color-Tec® field screening at a Navy site saved 10% to 20% on the analytical costs, compared to using a fixed-base laboratory.

Aquifer Testing via Slug & Pumping Tests with Dynamic Sampling during Pumping Tests

Pumping tests in an adjacent (i.e., uncontaminated) portion of the site supported the design of a Plume Control System for FPL's ISFSI Project.

Ponar Dredges for Sediment Assessment



Sediment sampling at the Franklin Locks, along with environmental forensics, will assist USACE in differentiating contaminants from the locks and other potential sources.

Engineering Evaluation, Engineering Design and Cost Assessment of Remedial Options

Tetra Tech brings extensive remediation experience, utilizing both standard and innovative techniques. With this knowledge base, we are uniquely qualified to propose and evaluate remedial alternatives to address any site conditions and contaminant encountered at City sites. Our engineers and scientists have conducted hundreds of literature reviews and implemented a range of testing programs from bench-scale to full-scale operation for technologies including solvent extraction, thermal desorption, in-situ vitrification, liquid phase dechlorination, base catalyzed dechlorination, gas phase chemical oxidation, six phase soil heating, soil vapor extraction, phytoremediation, and a variety of forms of bioremediation.

Recognizing that the ability to quickly evaluate potential remedial alternatives is critical to successful remediation, we have completed hundreds of detailed Feasibility Studies (FS) nationwide in the past 5 years – including completion of streamlined Remedial Alternatives Evaluations (RAEs) for the FDEP. To accommodate the rapid, low cost RAE process, Tetra Tech engineers and scientists in relevant disciplines are identified by the Project Manager and networked quickly to "brainstorm" with key site assessment staff. Using the streamlined RAE approach, we collaborate with FDEP staff to rapidly develop a narrow list of feasible alternatives at the outset of the project. This saves effort that would be spent evaluating an expanded list of alternatives.

One of Tetra Tech's strengths is that we can use our extensive construction management and remediation experience to the City's benefit by preparing constructible and biddable remedial designs. At Tetra Tech, we believe that the best designs are those that are simple and easiest to construct. We are fully aware that costs for the design and additional field studies are a fraction of the costs of implementation. With that in mind, our engineers are committed to gathering sufficient data upfront and completing a design that will be successful in the field.

Easy access to construction engineers gives designers the chance to interact frequently with staff that oversee and execute remedial action designs. The interaction also helps in matching specifications to the method of construction and bidding terms (e.g., lump sum, unit rates, or time and materials). Another area that benefits from constructor/designer interaction is experience on knowing how to separate bid packages for best efficiency and how to manage project interface points.

Tetra Tech has completed numerous engineering designs using many different treatment processes, methods and techniques. We have prepared designs for many technologies, including:

- Thermal Treatment
- Bioremediation
- Chemical Treatment
- Impermeable Liners & Landfill Caps / Covers
- In-Situ Fixation / Solidification
- In-Situ Chemical Oxidation
- Groundwater Extraction & Treatment
- Dual-Phase Vacuum Extraction and Treatment
- Excavation and Stabilization
- Excavation & Off-Site Disposal
- Containment Barriers / Walls
- Structure Decontamination & Demolition

Tetra Tech provides a wide range of Procurement Assistance under our current contracts. These services also are necessary for our own subcontractors on turnkey assignments. Our procurement services include preparation of Request for Qualifications (RFQ); preparation and distribution of bid and procurement

packages; Request for Proposals (RFP); issuance of addenda for ongoing procurements or existing contracts; technical, quality, and cost evaluation of bids and proposals; review of subcontractor pre-qualification packages; and subcontract issuance, administration, and invoicing.

We have experience managing procurements and preparing related documentation in accordance with Federal Acquisition Regulations and their State or local counterparts. We have a "Contracts and Procurement Manager" in our Stuart, FL office who directly support the FDEP by subcontracting more than $3.2M under our current Hazardous Waste Cleanup Section contract, a third of which went to M/WBE firms.

We utilize our nationwide automated procurement system to support procurement activity. This computer-based system is a single database, which contains standard forms, terms and conditions, vendor information, and all previously awarded subcontracts. We are able to gain efficiencies by copying previous documentation and by sharing information on vendors, which classifies and tracks all business categories (M/WBE, SB, etc.). Tetra Tech's TetraLinx procurement system is capable of inputting, tracking, and reporting on:

- Requisitions – Status / Approval
- Solicitations – Status / Due Date
- Supplier Management – Current & Past Performance
- Subcontracts and Purchase Orders – Approvals, Issuance, & Closeout
- Invoice Vouchers – Payment Status (by date, number, & task)
- Buyer Workload – Current & Unassigned Requisitions
- Reports – P.O. Reports, Supplier Reports, Receipt by Vendors, Date, and Code

Remedial System Construction Oversight and Resident Project Representative Services

In addition to providing self-performed turnkey remediation services, Tetra Tech recognizes that we might be tasked to provide construction oversight of activities provided by other contractors. We have this experience through years of providing successful construction oversight on remedial system installations at sites including Big B Cleaners and Town N' Country Cleaners as well as source removals at sites including Royal Bumper Plating and the former Weekley Lumber site. We offer the following attributes to the City:

- Years of procurement experience as well as our pool of pre-qualified team subcontractors, ensures that we bring subcontractors to the job that can perform safely, on time, and within budget.
- Continuous communication by the Project Manager ensures that the City has current information on the status of remedial activities, and is included in decisions that need to be made during construction.
- Construction activities are performed with minimal disturbance of the site, thereby allowing business to continue, or to cause minimal impact at sites in residential areas.
- Construction activities are performed with a great deal of attention to Environmental Health and Safety, allowing us to cost-effectively maintain an impeccable health and safety record for City projects.

- Knowledge and experience in how to minimize potential change order disputes, maximize quality, and keep the project on schedule.

We often find that limited equipment laydown areas and material storage space pose a significant constraint. These issues at active facilities can present substantial risks to the public, on-site workers, and to businesses. We are conscious of these risks and ensure that construction activities are conducted and supervised in a safe and non-disruptive manner. We routinely seek input from the business owners on a construction sequence and site layout that best fits into their routine. This is beneficial to the City and the site owner, because it reduces the liability of each party.

Tetra Tech further recognizes the importance of conducting field activities in strict conformance with the Occupational Safety and Health Administration (OSHA) approved construction practices, as well as, other related environmental industry guidelines. Hazards encountered in construction extend beyond exposure to toxic materials, and include regular construction hazards associated with the operation of heavy equipment, working near or in excavations, working with or around moving mechanical equipment, and working with materials that present fire and explosion hazards.

Our safety program is founded on the "safety first" philosophy. The project-specific implementation of this program reduces risk, minimizes losses, and increases project productivity. We firmly commit to providing and maintaining a working environment that is free from safety and health hazards for all personnel working at our project sites. Personnel at every level of the organization demonstrate our commitment to health and safety through active safety program participation, by integration of safety into every aspect of our operations, and by client and third party recognition received for our project execution efforts. Every employee completes a self-study course in Loss Control. Our belief is that all incidents are preventable and our goal for this and every project is **Zero Incident Performance** through proper planning, tasking and error-free execution.

Industrial Hygiene Services

Tetra Tech is a recognized leader in providing industrial hygiene and safety consulting services. We have provided these services to Fortune 500 companies, government agencies, and small businesses across the United States and overseas. Our extensive capabilities offer proven and effective solutions for meeting your occupational health and safety challenges. Our staff of safety and industrial hygiene professionals are exceptionally well qualified and experienced. The areas of technical expertise our current staff possess include:

- Certified Industrial Hygienists (CIH)
- Certified Safety Professionals (CSP)
- Certified Health Physicists (CHP)
- Health & Safety Specialists
- Certified Trainers
- Compliance Specialists
- Radiation Safety Specialists

Our staff of certified industrial hygienists and industrial hygiene technicians are skilled in providing a full range of industrial hygiene services – ranging from qualitative and quantitative sampling and exposure assessments, to developing, implementing, and evaluating comprehensive industrial hygiene programs. An overview of our service capabilities in this area include:

- Workplace occupational health evaluations
- Air Sampling & Analysis
- Ventilation Surveys
- Personal and Work Area Exposure Assessments
- Personal Protective Equipment Evaluations
- Hazard Control Evaluations
- Noise Monitoring and Control;
- Hearing Conservation Programs
- Occupational Health-Based Risk Assessments
- Asbestos and Lead Identification, and Exposure Assessments
- Indoor Air Quality Evaluations
- Program Assessments
- Expert Witness Services
- Training Services.

Health and Safety Compliance

Tetra Tech is committed to a strong safety environment demonstrated in not only corporate philosophies but in actions, including:

- **Management Commitment** – Our senior management meets weekly to discuss policies, projects, and incidents with the goal of identifying issues and providing resources for corrective actions. Each project is also reviewed quarterly to determine environmental and safety performance. Management Commitment is also demonstrated through providing the personnel and resources to implement the other elements of the program discussed in this section.
- **Employee Involvement** – We encourage and reward employee involvement. We encourage involvement through our Zero Incident Performance (ZIP) slips, involvement in preparing health and safety plans, and interaction in daily toolbox meetings. We reward employees regularly through our Spot Bonus program, often for raising safety issues. We also acknowledge our employees involvement in our regular safety communications.
- **Hazards Analysis and Controls** – Hazards analysis begins before the contract is won. Every project is reviewed for significant safety, environmental, and project risks with controls identified. This

Safety Focus

Tetra Tech places the highest emphasis on safety as evidenced by the following:

- **Completed two years and 6,000,000 work hours (including subcontractors) without a lost workday case**
- **Received 100% - the highest score any company has EVER received – on the National Safety Council Barometer Employee Perception Survey**

information is used to better identify costs for controls and identify the correct personnel. Work plans, including health and safety plans, include risk analysis and controls that are specific to the individual tasks.

- **Training** – Training is integral to our success. Tetra Tech has developed and provides several in-house training programs to improve safety performance. An experienced construction manager at Tetra Tech, for example, typically has received over 100 hours of training not required by regulation. This training starts with new employee orientation. Supervisors then complete a Loss Control Leadership course. Many supervisors are also trained as Site Health and Safety Officers (SHSO). The Environmental Safety Supervisor (ESS) training provides the OSHA 30-hour Construction Safety class (or equivalent) plus two days of company-specific training.

- **Subcontractor Safety Requirements and Programs** – Tetra Tech ensures each subcontractor understands the Health & Safety Plan requirements and each subcontractor employee has the necessary and required training. The project manager and health and safety manager meet with subcontractor managers prior to the start of each phase to ensure an understanding of site health and safety requirements and their readiness to perform work.

  Flowdown of our safety culture and expectations to our subcontractors will be the cornerstone of our safety program's success at the project. Our approach for subcontractor flowdowns includes five key elements:

  1. Prequalification,
  2. Outreach Training Program,
  3. Operational Readiness Reviews and orientation,
  4. Extensive mentoring and oversight during project execution, and
  5. Incentive Fee Provisions based on health and safety performance.

  Our comprehensive subcontractor safety management process ensures low safety performance risk and results in subcontractor performance which meets or exceeds the City's accident program expectations. This is further demonstrated by our own Experience Modification Ratio (EMR) and days away from work injury incidence rate as outlined below and shown in the table:

Table 1. Experience Modification Rating

Year	Total Recordable Incident Rate	Lost Work Day Incident Rate	Experience Modification Rating
2011	0.57	0.14	**0.76**
2012	0.67	0.10	**0.76**
2013	0.69	0.15	**0.80**

- Tetra Tech's current Workers Compensation EMR is 0.80.
- Our days away from work injury incidence rate for the last three years are shown on the following table. The incidence rate is calculated by multiplying the number of days away from work injuries for the particular year by 200,000, and then dividing the product by the man-hours worked for that year.

Laboratory Compliance

Tetra Tech does not operate an analytical laboratory as part of its Florida Operations. However, Tetra Tech only subcontracts with National Environmental Laboratory Accreditation Program (NELAP) certified laboratories. The following subsection presents a general outline of typical laboratory QC protocols and requirements. Laboratory QC requirements may, depending on analytical method, include the following:

- Method blank;
- Matrix spike (MS)/matrix spike duplicate (MSD);
- Laboratory control spike (LCS):
- Surrogate compounds;
- Internal standards;
- Interference check sample (ICS); and
- Laboratory duplicate sample.

Descriptions of these QC samples are provided below. Frequencies, criteria and corrective actions for the required laboratory QC samples are determined by the applicable method, as outlined in the project specific documents.

A **method blank**, also known as a preparation blank or a laboratory reagent blank, is analyzed with every batch of samples to ensure that contamination has not occurred during the analytical process. Method blanks consist of a portion of analyte-free water or solid that is processed through the entire sample procedure the same as an environmental sample.

MS/MSD samples (also known as spike/duplicate samples or laboratory fortified samples) will be used to assess precision and accuracy of the analytical methods. In this procedure, additional volume of an actual field sample is collected at a specific location, and two aliquots are "spiked" by the addition of known amounts of an analyte or analytes and these samples are then analyzed identically to the field samples. A comparison of the resulting concentration to the original sample concentration and among the two "spiked" sample concentrations provides information on the ability of the analytical procedure to generate a correct result from the sample. One MS/MSD is required for each batch of samples analyzed, with a batch being up to 20 samples. Therefore, additional volume for MS/MSD analysis will be collected at a rate of five percent.

NELAP Accredited Laboratories

Our subcontractor laboratories, ALS, Jupiter Environmental and KB Labs are equipped with state-of-the-art instrumentation, data processing software, and computer systems to ensure successful management of large-scale projects.

A **LCS sample** consists of an analyte-free water or solid phase sample that is spiked with target analytes at a known concentration. The LCS is analyzed to provide information on the accuracy of the analytical methods and on the laboratory's performance. LCS samples should be prepared from a stock solution different than the one used to prepare the calibration standards.

Surrogates are compounds added to every organic analysis sample at the beginning of the sample preparation to monitor the recovery in regard to sample preparation and analysis. Surrogate recoveries will be used to assess potential matrix interferences.

Internal standards are used to provide instrument correction for variation in instrument performance and injection volumes. Internal standards also establish relative response factors for the analytes.

An **ICS**, which contains target analytes at known concentrations, verifies the laboratory's inter-element and background correction factors. Analysis of ICS samples is unique to metals analysis using the inductively coupled plasma (ICP) method.

A **laboratory duplicate sample** will be prepared and analyzed for each batch of samples of similar matrix. These samples serve to demonstrate acceptable method precision (calculated through RPD values) by the laboratory.

Tetra Tech routinely conducts data analyses and/or validation for a variety of clients. The procedures described in the following subsections are generally applicable to a wide variety of projects, which produce analytical data, but are not intended to provide a thorough description of the complete processes.

The overall QC objective for the field investigation is to develop and implement procedures that will provide data of known and documented quality. Quality objectives for each of parameter are determined based on the level of data required. Descriptions of these characteristics are provided below.

Precision is the measurement of agreement in repeated tests of the same or identical samples, under prescribed conditions. Analytical precision can be expressed in terms of Standard Deviation (SD), Relative Standard Deviation (RSD) and/or Relative Percent Difference (RPD). The precision of analytical environmental samples has two components - laboratory precision and sampling precision. Laboratory precision is determined by replicate measurements of laboratory duplicates and by analysis of reference materials. The objectives for laboratory precision are specified in the project or program documents. The precision of the field sampling effort is determined by the analysis of field duplicate samples. Field duplicate analysis will be performed at a rate of 10 percent (i.e., one field duplicate for up to every 10 environmental samples), and acceptance criteria for these duplicates shall be an RPD of 50 percent.

Accuracy is the degree of agreement of a measured sample result or average of results with an accepted reference or true value. It is the quantitative measurement of the bias of a system, and is expressed in terms of percent recovery (%R). Measurements of accuracy for the laboratory include surrogate spike, laboratory control spike, matrix spike and matrix spike duplicate samples. The laboratory must meet or exceed control limit objectives as determined by the project requirements.

Representativeness is the degree to which the results of the analyses accurately and precisely represent a characteristic of a population, a process condition, or an environmental condition. In this case, representativeness is the degree to which the data reflect the analytes present and their concentration magnitudes in the sampled project areas. Representativeness of data will be ensured through the selection of sampling locations and implementation of approved sampling procedures. Results from environmental field duplicate sample analyses can be used to assess representativeness, in addition to precision.

Comparability is the degree of confidence with which results from two or more data sets, or two or more laboratories, may be compared. To achieve comparability, standard environmental methodologies will be employed in the field and in the laboratory, including:

- Using identified standard methods for both sampling and analysis phases of each project;
- Ensuring traceability of all analytical standards and/or source materials;
- Verifying all calibrations with an independently prepared standard from a source other than that used for calibration;
- Using standard reporting units and reporting formats including the reporting of QC data;
- The assessment or validation of all analytical results, including the use of data qualifiers in all cases where appropriate; and
- The requirement that validation qualifiers be provided at all times with the associated analytical result.

These steps will ensure all future users of either the data or the conclusions drawn from them will be able to judge the comparability of these data and conclusions.

Completeness is defined as the percentage of samples that meet or exceed all of the criteria objective levels for accuracy, precision and detection limits within a defined time period or event. It is the measure of the number of data "points" which are judged to be valid, usable results. The objective for completeness varies by project and can be as high as 95 percent.

Analytical methods have specified detection limits that are matrix-, moisture- and dilution-dependent. The practical quantification limit (PQL) actually determined for a constituent for a specific sample may be higher due to these issues. Moisture-dependence is only a factor for solid samples (i.e., soils). Results deemed "non-detect" are reviewed to verify that the **sensitivity** of the chosen methods was adequate to meet the applicable standards.

Field and laboratory blank samples are analyzed with the project samples to evaluate the potential for outside contamination of the environmental samples. Data validation determines the need for qualification of environmental sampling analytical results based on **blank contamination**.

QC objectives represent the data quality necessary to meet the project's technical goals. The QA/QC efforts discussed in this section focus on controlling measurement error, and ultimately providing a database for estimating the uncertainty in the measurement data for the project. QA objectives will be evaluated throughout each field investigation to see if the results for the project meet the stated objectives. If these objectives are not being met, the precision and/or accuracy of the sampling data will be decreased, and corrective actions shall be taken.

Asbestos and Lead Based Paint Management Services

Asbestos surveys will be completed as per the "Asbestos Hazard Emergency Response Act" (AHERA), the industry wide procedure for performing asbestos surveys. Any presumed ACM in structures will be cataloged. Based on AHERA, suspect ACM will be identified as unique "homogeneous materials,"

which is defined as materials that are any material like in color and texture, and serves a similar function. The material will then be divided into three categories, surface material, thermal system insulation, and miscellaneous material, and a determination will be made as to friable and non-friable. Additionally, a survey of the "functional spaces" of structures will be performed, which are spatially distinct units within a work area as well as the approximate year of construction. These may include separate living spaces, bathrooms, storage rooms, mechanical spaces, shafts, fan rooms, equipment rooms, etc., which help to arrange the materials in a systematic and logical order.

A state-specific certified asbestos inspector will perform the survey and sample collection. Appropriate procedures will be followed as not to create an exposure during sampling activities to ensure the safety and health of the asbestos inspector and any occupants of the structures.

Multiple samples of each type of "homogeneous materials" will be collected, placed in plastic bags, tied, and given a unique sampling number. All samples will be recorded on chain of custody forms signed by the inspector taking the sample and submitted to a state-certified laboratory for analysis for friable asbestos according to Polarized Light Microscopy (PLM) EPA Method 600/M4-82-020. Suspect non-friable ACM will be analyzed by utilizing transmission electron microscopy (TEM).

Lead-based paint surveys will be performed following the protocols stated in "HUD Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing." The inspection and sampling will be conducted as a surface-by-surface investigation to determine the presence of LBP by a certified (licensed) lead-based paint inspector or risk assessor (as per 40 CFR Part 745). A list of separate areas in the structures (e.g., living units, common areas, and exterior site areas) will be prepared, and areas that can be grouped together based on similarity of construction materials and common painting histories will be determined. In each group of similar types, potential testing combinations will then be determined, generally characterized by the room equivalent, the component type, and the substrate.

Depending on the requirements for the site-specific building to be surveyed, paint chips may be analyzed on-site by x-ray fluorescent instrumentation (XRF) and/or off-site by an accredited laboratory. Portable XRF lead-based paint analyzers may be used because of the demonstrated ability to determine if lead-based paint is present on many surfaces and to measure the paint without destructive sampling or paint removal, as well as the high speed and low cost per sample. The inspector will compare the XRF reading against thresholds based on the specific substrate painted (e.g., wood, metal) to determine results as "positive," "negative," or "inconclusive." Inconclusive readings may be confirmed by laboratory analysis, or assumed to be "positive." Paint chips can also be sent directly to the laboratory without XRF.

When paint chip samples are collected for off-site analysis (e.g., when result is inconclusive by XRF, when a component type is not measured by XRF, or other reason as determined by the inspector), sampling will be performed in accordance with ASTM E1729, Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination and/or any state-specific requirements. Generally, an area of approximately 4 square inches (or 25 square centimeters) will be sampled. Analysis will be conducted by Inductively Coupled Plasma (ICP) spectroscopy or Atomic Absorption Spectroscopy (AAS). The HUD/EPA standard value equal to or greater than 1.0 mg lead/cm^2 or 0.5 percent lead by weight will be considered as LBP, unless there is a more stringent site-specific standard.

Underground Storage Tank Site Services

Florida Department of Environmental Protection Petroleum Contamination Site Cleanup Services

Under this program, Tetra Tech completed over 200 SARs involving soil gas surveys, soil borings, and installation of monitoring wells to define the horizontal and vertical extent of soil and groundwater contamination. Tetra Tech utilized portable gas chromatography to provide rapid screening of data on-site to guide investigative activities and utilized laboratory analysis of selected samples for confirmation of field screening results. The assessment activities conducted have been directed toward rapidly and cost effectively gathering accurate information to define the extent of contamination at each site and provide the basis for the development of technically sound, cost-effective remedial designs.

Tetra Tech also prepared over 50 Remedial Action Plans (RAPs) covering technologies such as free product removal, soil removal, soil venting, vapor extraction, air sparging, groundwater extraction and air stripping, bio augmentation and biostimulation, natural attenuation, and chemical oxidation. We emphasize in-situ remedies and bring additional experience with such technologies as permeable reactive barriers, slurry walls, and solidification.

Automotive Service Station Remediation, Boca Raton, FL

Tetra Tech was retained to evaluate rapid remedial technologies for a former automotive service station in Boca Raton. Prior investigations identified a groundwater plume as a result of a leaking UST; a pump and treat system had been operating with little success. Through a focused engineering study, Tetra Tech selected in-situ chemical oxidation using a variation of Fentons reagent. We also designed a permeable reactive barrier to stimulate biotreatment of a neighboring site BTEX plume that was affecting the property. This technology was selected as an expeditious, cost-effective, and proven cleanup method for the property. In addition, this treatment technology did not hinder new construction activities that occur at this former vacant site. The in-situ chemical oxidation process involved multiple injection points and four separate injection events that produced an 82 percent reduction towards cleanup target levels in approximately two months.

Spill Prevention Control and Countermeasure (SPCC) Plans for District Pump Stations

The District tasked Tetra Tech to support preparation of SPCC Plans for 40 pump stations. The Work Order specified Tetra Tech prepare two initial SPCC plans for pump stations G-409 and G-370. These plans served as templates for the remaining 38 plans that were prepared by the District. The first two plans were prepared by performing a site visit to collect information on the facility's oil handling and spill control equipment, general site drainage, operation procedures, and records and spill response plans. We

also calculated potential spill quantities, assessed applicability of rules to each facility, and documented the best practice responses to potential spill scenarios. Each of the 40 SPCC plans were certified by a registered Tetra Tech professional engineer. Tetra Tech ensured each SPCC plan clearly address the following three areas: operating procedures that prevent oil spills; control measures installed to prevent a spill from reaching navigable waters; and countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

Real Estate Development Support Services

Under a professional services contract with the South Florida Water Management District (District), Tetra Tech has performed a variety of real estate projects, which include Phase I and II ESAs, Title V permit applications, miscellaneous science projects, and Spill Prevention, Control, and Countermeasure (SPCC) plans for tanks. Environmental media sampling was conducted in strict compliance with the FDEP's Quality Assurance Rules and Standard Operating Procedures, and the District's Standard Operating Procedures and current approved District Field Sampling Quality Manual. Air permitting was conducted in accordance with the Clean Air Act (CAA), and the SPCC Plans followed the requirements of the Oil Pollution Act. Below is a brief description of projects that specifically include sampling activities.

> ***Tetra Tech is "…easy to work with and will make every effort to be as accommodating as possible, sticks to schedule, performs tasks with minimal guidance from District PM, produces quality results."***
>
> *SFWMD*
> *Performance Review*

Tetra Tech has a multi-year task order contract that focuses on Environmental Site Assessments to support the District's land acquisition program. The majority of lands proposed for acquisition are slated for environmental restoration or large-scale water storage projects. The associated environmental risks, especially for rehydration of former agricultural lands, are of great ecological concern. As such, the District relies heavily on our technical abilities, including superior field sampling and monitoring, a thorough understanding of the regulations associated with property owner liabilities and cleanup requirements, an understanding of the ecological risks associated with proposed changes in land use, and the existing relationships required having all responsible agencies in agreement on proposed restoration strategies. These agencies include the District, U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, and the FDEP.

Tetra Tech has been awarded over 50 work orders, including extensive Phase I/II investigations, risk assessments, water quality sampling, Title V permitting, and SPCC Plans. Site assessments have been performed on properties ranging from five acres to over 10,000 acres. Property land uses have included cattle pasture, dairies, citrus groves, sugarcane, residual application fields, and sites containing cattle dip vats. End use considerations typically drive sampling requirements. For example, if the property is slated for reservoir construction or wetland rehydration, ecological risk factors dictate more extensive laboratory analysis. We have developed strategic sampling plans to maximize site knowledge, while minimizing public fund expenditures. Other field tasks include endangered species surveys, wetland delineations, soil trenching and sampling, and groundwater sampling. Phase I and II ESAs performed to date include:

- Everglades Agricultural Area (discussed below)
- Lower East Coast Water Supply Tract
- Rocky Glades – L-31 North Tracts
- East Coast Buffer
- Ken Arnold Property
- McArthur Farms
- Kirton Ranch
- Goodbread Property
- Lakeside Ranch
- HHD Properties
- Star Farms
- U.S. Sugar
- Loxahatchee Floway
- Lake Hicpochee
- Oak Lake Cattle Company
- Sunrise Boys Citrus Groves
- Bryan Paul Citrus, Inc.
- Bob Paul Citrus, Inc.
- Gagbee, Inc. & Rock A Way Properties
- Shady Oaks Fish Camps
- Steele's Property
- Lykes Bros., Inc.
- Parker Family Trust Property
- Allapattah ESAs
- L63-L64 Improvements
- Nature Conservancy Properties
- Lemkin Creek
- Duda & Sons, Glades Co.

Steele Property

As part of the Comprehensive Environmental Restoration Program (CERP), Indian River Lagoon South, Allapattah Complex – Natural Storage & Water Quality Treatment Area, the District was negotiating the acquisition of the Steele Property for natural wetland and habitat restoration. The site consists of 961 acres in rural Martin County being used for cattle grazing and occasional hay cultivation. From 1983 to 1995, a commercial dairy was operated on a portion of the property.

Tetra Tech performed a Phase I/Phase II ESA according to ASTM standards. The intent of the ESA was to evaluate:

- Current and past land-use for indications of the generation, use, storage, and/or disposal of hazardous substances or wastes;
- Potential for contaminated environmental media on the property stemming from current or past land-use activities and, to the extent possible, potential impacts from adjacent off-site land uses; and
- Disposal options for miscellaneous equipment, debris, contaminated soil, and sludge/sediment.

Several on-site areas were found to contain recognized environmental conditions (RECs). These areas included the north and south pole barns, the maintenance building, several residences, the borrow canal, and the sewage lagoon.

RECs warranting Phase II investigation included ASTs, waste oil containers, engine oil drums, chemical carboys, chemical storage areas, open floor drains, spill areas, debris piles, and abandoned equipment areas. Phase II sampling confirmed the presence of solid waste and/or metals and petroleum contamination. Tetra Tech provided the District with an approach and estimated costs for addressing the RECs noted in the ESA.

As a follow-on task, Tetra Tech provided environmental engineering services throughout the remainder of the project, from planning to construction. We developed a sampling and analysis plan as well as a restoration and remediation plan. As part of these efforts, several areas required corrective action. Tetra Tech conducted corrective action measures at the site in support of the District's intended future land use of wetland restoration or water attenuation reservoir. The overall result of the project was site restoration to facilitate water storage and surface water flow as part of the overall CERP.

> ***Tetra Tech's "…team brings unique regulatory experience and contacts, which has been essential in our ability to have close coordination between District staff and other agencies, to ensure acceptance of proposed actions."***
>
> *SFWMD*
> *Performance Review*

Steele Property Corrective Action

Several areas requiring corrective action were identified during the ESA. As a follow-on task, Tetra Tech conducted corrective action measures at the site in support of the District's intended future land use of wetland restoration or water attenuation reservoir. As part of the corrective action, we performed the following tasks:

- Properly abandoned, in place, the septic system near the old barn;
- Properly abandoned three on-site wells;
- Excavated and properly disposed approximately 100 tons of soil exceeding Sediment Quality Assessment Guidelines (SQAGs) for total recoverable petroleum hydrocarbons (TRPH), arsenic, and barium;
- Performed closure of sewage lagoon using a two-foot soil cap over existing sediment; and
- Performed closure of borrow canal by pushing in canal banks to create a minimum two-foot soil cap over existing sediment.

U.S. Sugar Acquisition

Tetra Tech was one of five District contractors who quickly mobilized to assess the River of Grass, Everglades Restoration Project in July 2008, an emergency project under the FDEP Site Investigation Section. The initial field activities at U.S. Sugar were Phase I ESAs at the Southern Gardens Citrus Processing Plant and the Dunwody and Alcoma Groves, which encompassed 10,000 acres of citrus. Tetra Tech identified potential point sources which included:

- Burn Areas
- Pump Stations
- Septic Systems
- Canker Wash Stations
- Maintenance Areas
- Chemical Mix/Load Staging Areas
- Cattle Pens, and an
- Air Strip

During the Phase II work at U.S. Sugar, the point sources identified above were sampled with analyses matching the source, e.g., petroleum analyses at pump stations and pesticide analyses at mixing areas. In addition, Tetra Tech performed ten-point composite soil sampling collected from 50-acre grids in the citrus groves and sugarcane fields. The composite soil samples in the agriculture areas were analyzed for RCRA metals and copper, organochlorine pesticides, organophosphorus pesticides, and chlorinated herbicides.

Shady Oaks ESA and Corrective Action

To assist the District in property acquisition associated with the Kissimmee River Restoration Project, Tetra Tech performed a Phase I/Phase II ESA of this former agricultural property. We developed a streamlined sampling program to target suspected areas of contamination across the site. Soil and groundwater contamination in the form of petroleum, metals, and pesticides was identified at several areas. Included in our ESA, we provided a streamlined approach to corrective action for the Camp Store, Cattle Pen, Maintenance, and Disposal Areas. A Corrective Action Plan was submitted to FDEP with Tetra Tech's design. Design elements include well abandonment, well installation, monitoring, excavation, open pit air sparging, off-site disposal, on-site consolidation, and capping. Tetra Tech implemented the design, excavation and disposal, and open pit air sparging, and were successful at removing or reducing the contaminant concentrations to acceptable levels.

Coastal Engineering

Our full-scale Coastal Engineering services include design and engineering of marinas, piers, seawalls, groins, revetments, shoreline stabilization, bridges, coastal processes modeling, beach design, and beach renourishment. Tetra Tech was originally founded as a coastal engineering firm in 1966, and has retained the value and importance of this specialty engineering service ever since. Our coastal engineering

professionals, coupled with our other service disciplines that are necessary for the successful execution of projects constructed in or near the marine environment, have provided exemplary service to numerous local, state and federal government clients throughout the past 48-plus years. Our skilled staff, from entry level engineers and scientists to our senior engineers, understand the complexities of working in the coastal setting, and yet adhere to the principles and practice necessary to result in a successful end product.

We have blended outstanding basic core competencies of engineering, planning and permitting with some very unique and specialized service offerings. Our team brings expertise and services in the following areas:

Engineering

- Coastal and Marine Engineering
- Shoreline Stabilization Projects
- Waterway and Canal Dredging
- Coastal and Shoreline Protection Design
- Structural Engineering
- Land Development Planning and Permitting
- Geotechnical Engineering
- Parks Planning, Engineering and Permitting
- PE Diving Services
- Terrestrial and Hydrographic Surveys

Outreach

- Active Public Outreach
- Passive Educational Programs

Permitting

- Florida DEP Permitting (ERP and JCP)
- FFWCC and U.S. Coast Guard Waterway Marker Permitting
- US Army Corps of Engineers Permitting
- State and Federal Government Liaison
- Local Government Permitting

Biological

- Estuarine Ecology
- Benthic Surveys
- Wetland Delineations
- Mitigation Planning & UMAM Assessments
- Seagrass and Aquatic Habitat Restoration
- Water Quality Sampling & Analysis
- Electronic Data Collection and Instruments

Tetra Tech's local engineering and science staff, located in our Miami, Boynton Beach, and Stuart offices, have extensive experience working in Florida's unique marine ecosystems. This staff provides a full range of engineering and environmental design services in support of tasks to be assigned under this contract. Our local staff possesses the necessary task leadership experience described in the RFP.

Full-Scale Engineering Design

Tetra Tech offers specialized civil, structural, and geotechnical engineering to address navigational and shoreline protection needs. Often the projects involve large-scale construction work, such as creation of breakwaters and sheltered harbors, navigable waterways or floodwalls, and levees. Other times the need may be to resolve large loads and movements associated with berthing of ships or restraining offshore platforms.

Tetra Tech merges its marine structures design capability with coastal and hydraulic engineering knowledge to design:

- Flood gates and navigation locks
- Piers/bulkheads

- Wharf/quays
- Dolphins and mooring cells
- Fendering and bollards
- Pile anchorage
- Mooring line systems
- Dockside infrastructure
- Rail and bridge structures

"I was very impressed by the breakwater habitat islands – I've never seen a proposal with such a well-designed net environmental benefit before; you really did a great job."

Alexis Meyer, NOAA – NMFS Protected Resources Division

From master planning to assistance with obtaining project permitting, Tetra Tech offers a full range of planning and regulatory support to port and industrial clients around the world. Tetra Tech's planners, scientists, public involvement facilitators, engineers, and operation specialists work together as a team to provide a comprehensive and innovative approach to the master planning process. These professionals bring both international and domestic experience to planning projects. We are experienced in development of "Greenfields" and "Brownfields" sites and expansion of existing port facilities and waterways. Tetra Tech has a thorough understanding of the importance of integrating the requirements of marine facilities, structures, environmental standards, and mitigation requirements with community-driven concerns that are often a part of the planning process. Our expertise in all areas of work required in port, cargo terminal, and waterway development makes us well qualified to assist public and private sector clients with their master planning and related facility development needs, for example:

- Strategic Port Plans
- Feasibility Studies and Market Analysis
- Port Master Plans
- Site and Facility Plans
- Terminal Development Projects
- Environmental Impact Studies
- Permitting Support
- Security Planning

Permit Preparation

Tetra Tech will lead the overall effort and coordination in permitting with open and regular communication by the Team with the City, FDEP, USACE and federal/state commenting agencies. Our permitting leads have decades of experience in preparing and processing environmental resource permits. As previous key employees of FDEP, these individuals were responsible for implementing the very programs that the City of Key West will need to navigate in order to achieve their redevelopment goals. This past experience with the rules and regulations is imperative to be able to navigate those nuanced elements where subject judgment dominates. Tetra Tech's permit leads have successfully utilized their skills and past experiences to receive permits from both the FDEP and the USACE for similar projects.

Ms. Christa Razem of the City of Fort Pierce expressed thanks and gratitude that the Tetra Tech team, especially Dick Czlapinski and Jayne Bergstrom, who were able to negotiate expeditiously with the FDEP to gain the Sovereign Submerged Lands authorization to construct the 13-acre island project. "The City was jubilant that Tetra Tech had flipped FDEP from a NO, to a definite maybe, and there is a clear path forward."

The keys to successfully permit any coastal project is to understand the processes for permit review and approval and rules that guide those processes and to have positive working relationships with agency permit application reviewers. Tetra Tech has the unique privilege of having these with their current in-house staff.

The following permits and consultations are typically required for construction waterward of mean high water, or the restoration of dune systems and replenishment of beach land mass seaward of the current mean high water line (MHWL) or established Erosion Control Line (ECL):

a. **A Joint Coastal Permit (JCP) filed with the FDEP Bureau of Beaches and Coastal Systems (BBCS)**: This permit allows the placement of sand seaward of the current MHWL as will be required for any beach nourishment activities regardless of sand source or method of delivery. Dune restoration will not require a JCP for the deposition of sand unless dredged from a navigable waterway. Additionally, any source of marine sand material will require to be permitted under the JCP. In the event that dune restoration material is acquired from an upland source, it is likely that a separate Coastal Construction Control Line (CCCL) permit will be required for those activities.

b. **An Individual Permit request filed with USACE**: The issuance of this federal permit typically follows successful authorization of the JCP. Under the current regulatory process the USACE recognizes and accepts the JCP application as a unified mechanism for review and approval of an Individual Permit. Coordination with the appropriate USACE regulatory branch, located in Palm Beach Gardens, will be essential to timely processing of the proposed project application and initiation of consultation with the various Federal agencies including but not limited to the U. S. Fish and Wildlife Service, National Marine Fisheries Service, and U. S. Environmental Protection Agency.

c. **Coastal Zone Management Act (CZMA) Consistency Determination, US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Section 7 Consultations, and NMFS Essential Fish Habitat Assessments:** These consultations will be required in order for commencement of planned land restoration activities that might impact the habitat of any state or federally-protected marine or terrestrial species. Based on the team's experience with similar projects, one aspect of the JCP process is a Coastal Zone Management Act consistency determination that will be issued before FDEP authorization for project implementation will be issued. This process is integrated into the review process operating independently of, through the Florida State Clearinghouse, the technical and environmental review and coordination conducted by the FDEP. The team will also coordinate with the appropriate federal resource protection agencies (NMFS – Miami, West Palm Beach, and St. Petersburg, and USFWS – Vero Beach) responsible for listed species protection.

d. **State Historic Preservation Office (SHPO) Consultation:** This consultation is required to identify the potential impacts to known or suspected areas of cultural resources of significance. Cultural resource evaluations and SHPO coordination will not likely be

required for the beach and dune restoration aspects of the project. However, because of the unique nature of offshore borrow source development, it is expected that the magnetometer and related remote sensing techniques customarily undertaken as part of the SHPO project review and impact assessment process of offshore borrow sources will be undertaken by SDI.

Bidding Services

Tetra Tech's professionals will coordinate with the City in the preparation of the Construction Documents, incorporating the final approved plans and specifications, the standard and special conditions of regulatory permits and the City's Contract Documents. The Team will also assist the City by participating in pre-bid meetings and addressing questions on the plans and specifications that may arise during the contractor bid process. The team will review contractor bid packages and provide selection recommendations to the City based on qualifications, cost, and value. The entire process will be designed to acquire the best qualified contractor at the most economical price.

Construction Administration

During the Construction Phase, Tetra Tech will serve as the Engineer-of-Record and provide the expertise for specialized construction administration services including:

- *General Administration of Construction Contract*: In general, Tetra Tech shall consult with and advise the City, act as the City's representative, and issue all of the City's instructions to the Contractor.
- *Visits to Site and Observation of Construction*: Tetra Tech, using qualified personnel, will conduct regular daily visits to the project site to observe and document the progress of construction and document contractor compliance with the project permit conditions, plans and specifications.
- *Defective Work*: During such visits and on the basis of such observations by Tetra Tech may disapprove of or reject Contractor work while it is in progress if we believe that such work will not produce a completed Project that conforms to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.
- *Interpretations and Clarifications*: Tetra Tech shall issue necessary interpretations and clarifications of the Contract Documents and in connection therewith prepare work directive changes and change orders as required.
- *Applications for Payment*: Tetra Tech will review, assess and make recommendations relative to applications for payment from the Contractor.
- *Contractor's Completion Documents*: Tetra Tech shall receive and review reports by the Contractor to fulfill permit conditions and the Contract Documents.
- *Project Certification*: As the Engineer-of-Record, Tetra Tech shall prepare and submit the final project certification required by the FDEP as part of the issued Joint Coastal Permit.

Site/Post-Construction Monitoring

Tetra Tech will provide the lead services for this task due to the level of constant coordination of efforts and project deliverables that tie into all of the services discussed in this section. Tetra Tech "self-performs" many types of construction, thereby gaining a real understanding of the construction of waterfront and other facilities. To our clients, this advantage means a greater accuracy in cost estimating,

fewer problems during construction, and realistic design and construction scheduling. Our design engineers, scientists, cost estimators, and construction engineers have the experience to not only get projects completed on time, but within budget.

Sub-Consultants

Tetra Tech's local engineering and science staff, centered in our Stuart and Boynton Beach offices, have extensive experience working in Florida's unique ecosystems. Our staff provides a full range of engineering and environmental design services in support of tasks to be assigned under this contract. Our local staff possesses the necessary task leadership experience described in the RFP, with additional technical resources available at a national level.

While Tetra Tech has the diverse professional resources at its disposal, we recognize the value of smaller local specialty firms who offer unique services and experience in specific areas and we have included them on our project team. We have supplemented our core strengths of engineering design, permitting, public outreach, and biological services with a host of specialized services provided by subcontract team members.

The primary objective of the Tetra Tech team is to serve as a seamless extension of City staff in fulfilling the City's Environmental Engineering objectives for the Truman Waterfront Park Project. Tetra Tech's team has the technical expertise and project experience necessary to effectively execute the project through all phases. This team will meet and exceed the expectations of the City, and deliver the Environmental and Coastal Engineering Projects to your complete satisfaction. The following table outlines our subcontracting partners, many of which are qualified small, minority-, woman-, and/or service-disabled veteran owned businesses and 100% of which have long-standing relationships with Tetra Tech.

Tetra Tech's Subcontracting Team		
Subcontractor	**Worked with Tt**	**SB/SDV M/WBE**
ALS Environmental, Inc. (ALS) is a full-service analytical **Laboratory** with locations across the United States. Currently supporting Tetra Tech at DEP sites under the HWCS program out of their Jacksonville location.	■	
Test America Laboratories, Inc. (Test America) is a full-service analytical **Laboratory**, including dioxin analysis, with locations across the United States. Three laboratories (Tampa, Tallahassee, & Pensacola) provide greater coverage of the state.	■	
Jupiter Environmental Laboratories, Inc. (Jupiter) is a full-service analytical **Laboratory** currently supporting Tetra Tech at DEP sites throughout the state under our HWCS contract.	■	■
Laboratory Data Consultants, Inc. (LDC) is an environmental QA/QC chemistry and data management company with experience in data quality, database implementation, software development, and data usability. Instrumental in development of ADaPT software.	■	■
KB Labs, Inc. (KB Labs) is a mobile **Laboratory** Services, including field analysis and Membrane Interface Probe (MIP) services. For the past 10+ years, KB Labs has assisted Tetra Tech in rapid characterization of DEP sites under the HWCS program.	■	■
Groundwater Protection, Inc. (GPI) is a Drilling firm providing services statewide for DEP and Tetra Tech for 20+ years. Provided drilling services (e.g., DP, MW, etc.) on dozens of HWCS sites.	■	■

Tetra Tech's Subcontracting Team		
Subcontractor	**Worked with Tt**	**SB/SDV M/WBE**
Preferred Drilling Solutions, Inc. (PDS) is a well Drilling and soil boring firm, with an established relationship with Tetra Tech and DEP. Has worked at more than 80 DEP sites.	■	■
Subsurface Environmental, Inc. (Subsurface) is a Drilling firm specializing in environmental and geological services. Worked on DEP and Tetra Tech contracts for 6+ years.	■	■
ZEBRA Environmental, Corporation (ZEBRA) is a Drilling firm specializing in high quality subsurface sampling, installation, injection and data collection services Under our HWCS contract, Tetra Tech has relied on Zebra for implementation of one of our largest injection events.	■	
Island Surveying, Inc. has worked on projects ranging from individual pieces of property to most of the major parcels of land for the biggest developers in the Florida Keys.	■	■
Betsy Lindsay, Inc. (Betsy Lindsay) is a Surveying and mapping women-owned business that has worked for DEP on numerous HWCS sites over the past 10+ years.	■	■
Big Bend Environmental Services, Inc. (Big Bend) is a contractor specializing in remedial field services. Supported Tetra Tech with **Remedial Construction** services on several projects under our HWCS contract with DEP.	■	■
ESD Waste2Water, Inc. (ESD) is a **Remedial Construction** contractor providing design, manufacture, installation, and service support to Tetra Tech over the past 15+ years. Cutting-edge technology, low-maintenance designs, and superior customer service provide for long-term solutions. We currently have 10 mobile treatment systems supplied by ESD at our HWCS sites.	■	
Florida Environmental Compliance Corporation, Inc. (FECC) is a contractor specializing in demolition, spill response, remedial field services, land tank management. Supported Tetra Tech with **Remedial Construction** services on some of the largest projects under our HWCS contract with DEP.	■	
REA Remedial Solutions, L.L.C. (REA) has provided Remedial Construction services and equipment on several sites for DEP and Tetra Tech. REA is a federal 8(a) program certified company.	■	■
In-Situ Oxidative Technologies, Inc. (ISOTEC) is a full-service environmental remediation firm, pioneering In-Situ Chemical Oxidation (ISCO) techniques. Approved DEP technology. Under our HWCS contract, Tetra Tech has teamed with ISOTEC for **In-Situ Remediation** of some of our more challenging groundwater plumes.	■	
JRW Bioremediation. L.L.C. (JRW) is a supplier of cost-effective products for **In-Situ Remediation**. Tetra Tech has utilized these DEP-approved products at sites under our HWCS contract.	■	
Regenesis, Inc. (Regenesis) is a supplier of innovative products for **In-Situ Remediation**, utilizing DEP-approved enhanced bioremediation and/or chemical oxidation technologies. Under our HWCS contract, Tetra Tech has utilized these DEP-approved products at some of our more challenging DNAPL sites.	■	
Clark Environmental, Inc. (Clark) is a **Waste Management** services (e.g., transportation & disposal) for haz/non-haz waste. Clark is a women-owned business and has worked with DEP and Tetra Tech for 15 years. Meets all Tetra Tech internal TSDF requirements.	■	■
Southern Waste Services, Inc. (Eagle / SWS) is a contractor specializing in environmental remediation, **Emergency Response**, and **Waste Management** services. Twelve locations provide exceptional coverage of the state. SWS has worked with DEP and Tetra Tech for 5 years. Meets all Tetra Tech internal TSDF requirements.	■	
Florida Air Quality Solutions. (FAQS) is certified asbestos and lead based paint services contractor that meets all Tetra Tech internal H&S requirements.	■	■

A proven diverse team of subcontractors to support the City of Key West Environmental Engineering Services.

Office Locations

Tetra Tech and its subcontractors have a history of working in Florida and the Florida Keys, including Key West. The Tetra Tech office in Stuart, FL will serve as the headquarters for this contract. Subcontractors retained for this contract are also located in the State of Florida. Working facilities will be established to support specific tasks as they are issued. Remote field offices will be established, as necessary, to minimize impacts to project schedules and mobilization to project work sites. Currently Tetra Tech has established an office in Big Pine Key to support our "Casitas" Project in the Florida Keys Marine Sanctuary.

Proposed Key Staff

The key staff members that will be assigned to support the City through work orders for Environmental Engineering Services are described below. Our proposed organization chart is below, Figure 1. Full resumes can be found in Appendix A.

Shauna Stotler-Hardy, Project Manager

Ms. Stotler-Hardy has 14 years of professional environmental experience that include project manager, facility activity coordinator, lead chemist for the last six years at Naval Air Station Key West. She has managed DOD, DOE and commercial specific contracts that required management and coordination of numerous vendors and subcontractors; environmental investigations and remediation activities; construction projects for commercial facilities/clients; and coordinated activities with the USFWS, FDEP, SCDHEC, OCRM, USACE and various states historical organizations including FL SHPO. She has performed environmental analysis in the field at various sites and locations throughout Key West, in relation to prior operations of NAS Key West. She has contributed to the preparation of a number of environmental reports to support remediation cleanup efforts at various federal facilities and new licensing of nuclear power plants.

Jay McGovern, PG, Deputy Project Manager

Mr. McGovern has over 30 years of geologic, engineering, construction, and project management experience in commercial, governmental, industrial, and residential projects. Broad experience ranges from soil, sediment, rock, and hydrogeologic investigations and monitoring, field engineering, estimating, project management, remedial action construction, and project supervision. Mr. McGovern serves as project manager for the FDEP Hazardous Waste Site Cleanup Contract and he is responsible for coordinating, managing, and supervising the implementation of site assessments and remedial actions at drycleaning and orphaned hazardous waste sites. We have received site closure at 32 facilities through active remediation, monitored natural attenuation, and no further action.

Gregory Roof, PE, Environmental Engineering Lead

Mr. Roof has extensive technical experience and expertise are in assessment and remediation of contaminated sites, as well as underground and above ground storage tank system design, installation and removal. Mr. Roof also has experience in environmental auditing, Phase I ESAs, horizontal construction, asbestos abatement, SPCC plans, etc.

Michael Barnett, PE, Coastal Engineering Lead

Mr. Barnett is a registered Professional Engineer in AL, FL, MS and TX with over 30 years of experience in coastal engineering. In addition, Michael is a Diplomat in Coastal Engineering, an honor awarded by the Academy of Coastal, Ocean, Port and Navigation Engineers. Mr. Barnett has served in both private practice and for state government. He has led technical teams in the feasibility, planning, design, engineering, permitting, and construction oversight of beach restoration and nourishment projects in Florida. Prior to joining Tetra Tech, Mr. Barnett served for nearly 8 years as the Chief of the Florida Department of Environmental Protections' (FDEP) Bureau of Beaches and Coastal Systems.

Georgia Vince, Regulatory Lead

Ms. Vince has over 17 years of experience with regulatory and permitting programs for state, federal and local levels of government, included Sovereign Submerged Lands, Joint Coastal Permitting, Environmental Resource Program, Coastal Zone Management reviews and Section 404 permitting for large and small projects including linear pipelines, ports and offshore construction projects. Experience also includes Section 106 Consultation, wetland delineations, wetland mitigation, wetland restoration, environmental assessments, National Environmental Protection Act (NEPA) Analysis, threatened and endangered species biological assessments.

Kathleen Homer, RCRA Permitting

Ms. Homer has 35 years of experience in multimedia program and project management, quality assurance and quality control, and hazardous waste corrective action, permits , enforcement, and compliance. She has extensive experience with the implementation of RCRA , CERCLA, and other regulatory programs, for commercial, as well as federal, state, and local clients. She has managed and assisted on various contracts and projects that involved RCRA and CERCLA policy development, public participation, compliance, permitting , corrective action, and guidance. She has prepared RCRA permit applications for numerous private clients, as well as draft RCRA permits for regulatory agencies.

Stuart McGahee, PE, Construction Bids and Technical Review

Mr. McGahee has extensive experience reviewing complex bids, cataloging unit bid items and producing "apples to apples" line item comparisons so his clients can make the most informed decision when selecting a winning bidder. His bid tabulations summaries follow the technical review procedures specified in the bid documents and establish comprehensive rankings based on the parameters established by the City. The bids can then be compared line by line, column by column or based on a best value.

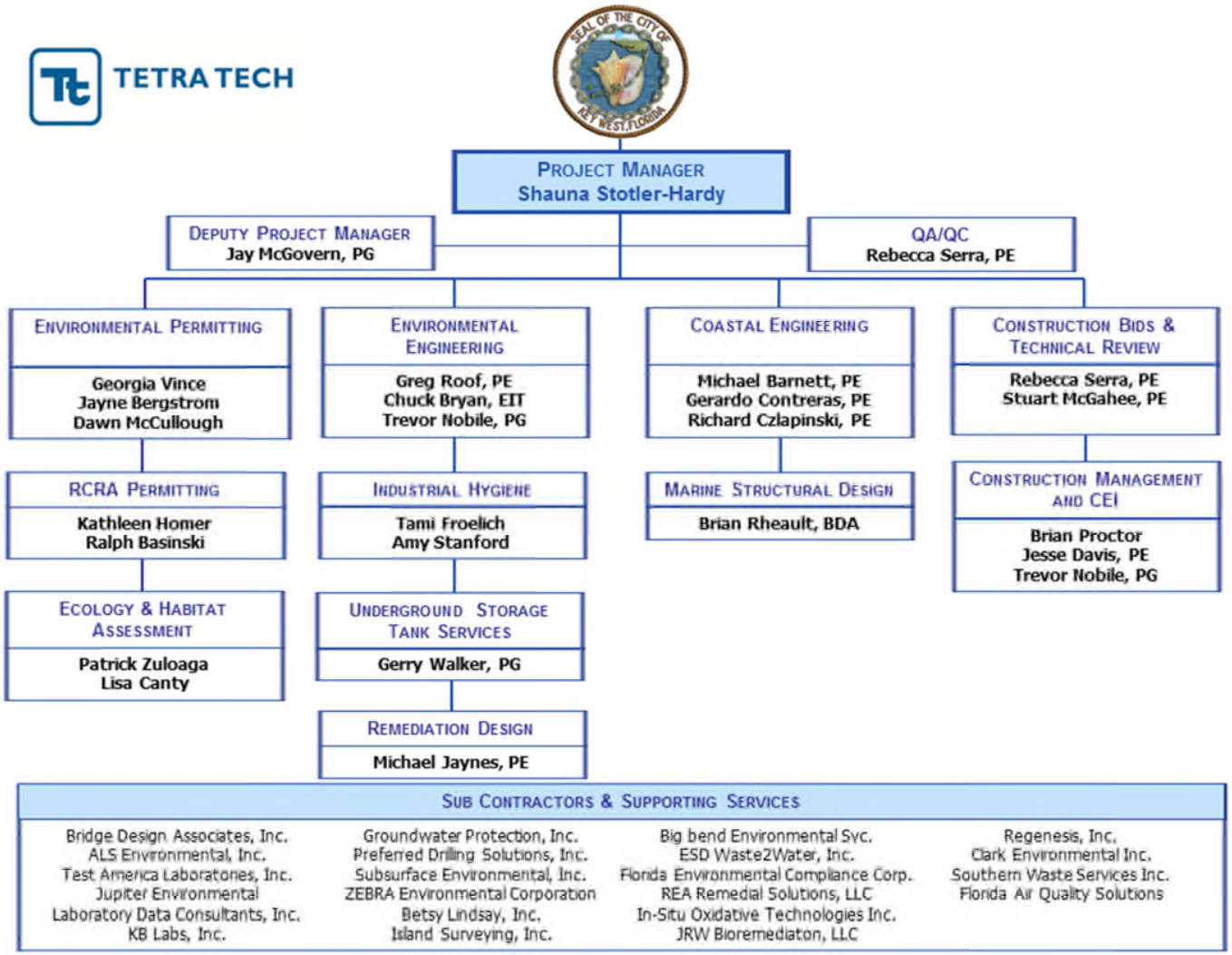
Brian Proctor, Construction Management

Mr. Proctor has 18 years of experience in land stewardship, natural resources management, wetland ecosystems, and natural areas restoration with a particular emphasis on restoration planning, permitting and implementation. He currently serves as the Operations Manager for Florida overseeing contract management, project financial performance to schedules, scopes and budgets. He has been the responsible person in charge of designing, permitting, planning, and implementing a diverse array of upland and wetland restoration projects. His experiences included delineation, assessment, and restoration planning and monitoring of inland and coastal resources for both upland and wetland habitats. Mr. Proctor is currently the project manager overseeing the construction and implementation of a $20 million island breakwater system in the Indian River Lagoon.

Tami Froelich, CIH, Health and Safety

Ms. Froelich is a Certified Industrial Hygienist (CIH) and Certified Safety Professional (CSP) with over 25 years experience. She also holds a Master's Degree in Public Health (MPH), Occupational Health & Safety Management. Her extensive industrial hygiene and safety experience includes overseas safety lead for over 22 countries, training supervisor, and air monitoring/sampling equipment technical representative.

Figure 1. Organizational Chart



Qualifications of Engineering Personnel

Table 2 contains a list of the Key Personnel proposed for the Environmental Engineering Services Contract and their qualifications.

Table 2. Names, Job classifications and Qualifications of Staff

Name	Job Classification	Qualifications	Florida PG/PE License
Greg Roof, PE	Senior Engineer	Environmental Engineer	50842
Michael Jaynes, PE	Engineer	Environmental Engineer	55441
Jay McGovern, PG	Senior Geologist	Remediation	1487
Trevor Nobile, PG	Staff Geologist	Field Services	2762
Stuart McGahee, PE	Senior Engineer	Coastal Armoring	57536
Rebecca Serra, PE	Lead Engineer	Hydrology	35624
Gerald Walker, PG	Senior Geologist	Remediation	1180
Gerardo Contreras, PE	Senior Engineer	Coastal / Structural	66381
Richard Czlapinski, PE	Senior Engineer	Coastal / Ocean	42834
Michael Barnett, PE	Senior Engineer	Coastal	44625
Jesse Davis, PE	Senior Engineer	Coastal / Civil	70660

Certifications

Tetra Tech holds Certificates of Authorization as a Florida Engineering Business (No. 2429) and as a Florida Geology Business (No. GB311). In addition, to the Tetra Tech employees listed above, other employees hold certifications in scientific and commercial diving, surveying, and industrial hygiene. Furthermore, almost all of our employees hold OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) and American Red Cross First Aid and CPR certifications. See appendix C for copies of professional licenses of key staff for this proposal.

Staff Experience and Availability

Key personnel proposed for this contract are presented below. Table 3 lists the Key Staff proposed and their experience as related to the described contract services. Table 4 shows Key Staff current percentage of time devoted to ongoing projects is provided in the column titled Current Workload and their availability for the next three years is shown in the column titled Anticipated Workload 3 Year Forecast. We have also identified each person's availability for this contract in the column titled Anticipated Availability for Environmental and Coastal Engineering Services.

Table 3. Staff and Services Matrix

TETRA TECH, INC.

	Personnel	Environmental Engineering	Remedial Services	Industrial Hygene Servivces	Underground Storage Tank Site Services	Resal Estate Development Support Services	Planning Services	Design Services	Permitting Assistance	Bid & Proposal Development Services	Services During Construction/Remediation	Coastal Engineering & Design	Surveying	Permit preparation	Bid & Proposal Developm Services
Environmental Engineering	Shauna Stotler Hardy	★	★	★	★	★	★	★	★	★	★				
	Jay McGovern, PG	★	★	★	★	★	★	★	★	★	★				
	Chuck Bryan, EIT	★	★		★	★	★	★	★	★	★				
	Trevor Nobile, PG	★	★	★	★	★	★			★	★				
	Georgia Vince					★	★		★	★		★		★	★
	Brian Proctor	★	★	★	★	★	★		★	★	★	★	★	★	★
	Stuart McGahee, PE	★	★			★	★	★	★	★	★	★	★	★	★
	Rebecca Serra, PE	★	★			★	★	★	★	★	★	★	★	★	★
	Gerry Walker, PG	★	★	★	★	★	★	★	★	★	★				
	Tami Froelich		★	★	★		★		★						
	Amy Stanford		★	★	★		★		★						
	Mike Jaynes, PE	★	★	★	★	★	★	★	★	★	★				
Coastal Engineering	Gerardo Contreras, PE							★				★	★	★	★
	Richard Czlapinski, PE											★	★	★	★
	Michael Barnett, PE											★	★	★	★
	Jayne Bergstrom					★			★			★	★	★	★
	Fancisco Martinez,EI	★						★		★	★	★			★
	Jesse Davis, PE											★	★	★	★
	Brian Rheault, PE											★	★	★	★
	Pat Zuloaga						★	★	★	★	★	★	★	★	★

Table 4. Availability Chart

Team Member		Office Location	Current Workload (% Utilization)	Anticipated Workload 3 Year Forecast (% Utilization)	Anticipated Availability for Environmental Engineering Services (% time)
	Shauna Stotler Hardy	Stuart, FL	60	50	50
	Jay McGovern, PG	Stuart, FL	55	50	50
	Chuck Bryan, EIT	Stuart, FL	60	60	40
	Trevor Nobile, PG	Stuart, FL	70	60	40
	Georgia Vince	Stuart, FL	50	70	30
	Brian Proctor	Stuart, FL	35	50	50
	Stuart McGahee, PE	Stuart, FL	50	60	40
	Rebecca Serra, PE	Stuart, FL	60	70	30
	Gerry Walker, PG	Tallahassee, FL	65	70	30
	Tami Froelich, CIH	Richland, WA	50	50	10
	Amy Stanford	Stuart, FL	60	60	40
	Gerardo Contreras, PE	Boynton Beach, FL	55	60	40
	Richard Czlapinski, PE	Boynton Beach, FL	40	70	30
	Michael Barnett, PE	Boynton Beach, FL	50	50	50
	Jayne Bergstrom	Boynton Beach, FL	10	60	40
	Jesse Davis, PE	Boynton Beach, FL	50	70	30
	Mike Jaynes, PE	Tallahassee, FL	65	70	30
	Greg Roof, PE	Jacksonville, FL	50	70	30
	Kathleen Homer	Stuart, FL	60	60	40
	Ralph Basinski	Stuart, FL	60	60	40
	Pat Zuloaga	Stuart, FL	80	80	20
	Lisa Canty	Stuart, FL	80	80	20
	Dawn McCullough	Stuart, FL	60	70	30

Relevant Experience

The following pages present our relevant experience on Environmental Engineering and Coastal Engineering Projects similar to the scope of work described in the RFQ.

Title and Location of Project	Years Completed	
	Professional Services	Construction Services
CERCLA Five Year Review of Sites IR 1, IR 3, IR 7, IR 8, IR 21, and AOC B, and RCRA Part B Permit Corrective Action Effectiveness Evaluation of Sites SWMU 1, SWMU 2, SWMU 3, SWMU 5, SWMU 7, and SWMU 9, Naval Air Station Key West, Key West, Florida; Naval Facilities Engineering Command Southeast; July 2010.	2008-2012	N/A

Project Details			
Name of Client	**United States Navy**	**Awarded Contractor**	
Client's Representative	**Brian Syme**	**Contractors Representative**	
Address	**PO Box 30 BLDG 135 NAS Jacksonville, Florida 32212**	**Address**	
Phone	**904-542-6151**	**Phone**	
Email	**brian.syme1@navy.mil**	**Email**	
Design Service Fee	**$1,057,000**	**Contract Award Amount**	
Estimate of Const Cost	**$1,033,000**	**Final Cost**	
Key Personnel Involved: *Shauna Stotler-Hardy, Chuck Bryan*			

Under contract to the U.S. Navy through the Comprehensive Long-term Environmental Action Navy (CLEAN) contract, Tetra Tech conducted a five-year review of the effectiveness of remedial actions at 12 Installation Restoration (IR) sites at Naval Air Station Key West, Florida. The purpose of the five-year review is to determine whether the remedies implemented at the 12 IR sites are protective of human health and the environment. These reviews encompassed 6 CERCLA sites and 6 RCRA sites. For each site, Tetra Tech presented a site description, chronology of significant events relating to remediation (e.g., when contamination was discovered, when preliminary assessment was conducted), a summary of preliminary sampling results, a description of any interim removal action that might have been undertaken, a description of any supplemental RFI/RI and associated risk assessments that might have been conducted, the selection of a remedy, the results of any subsequent sampling, a data review and evaluation to include an examination of trends in contaminant concentrations in environmental media (groundwater, surface water, sediment, and soil) over the five-year period, and a Technical Assessment that evaluated (1) if the remedy is functioning as intended, (2) if the exposure assessments, toxicity data, cleanup levels, and remedial action objectives used at the time of the remedy selection are still valid, and (3) if any information has come to light that could call into question the protectiveness of the selected remedy. The five-year review concludes with recommendations and follow-up actions, as appropriate. Performing the five-year reviews required an examination of trends in contaminant concentrations in surface water, groundwater, sediment, and soil and a comparison of these concentrations to

applicable regulatory standards. Current remediation activities are provided by the Remediation Action Contract contractor. This provides the Navy with no conflict of interest between each contractor's scopes of work.

Title and Location of Project	Years Completed	
	Professional Services	Construction Services
BRAC Five Year Review of Hamaca Hawk Missile Site, Truman Annex DRMO Waste Storage Area, Truman Annex Former Building 136, Truman Annex Building 223- Former Hazardous Waste Storage Area, Truman Annex City-Owned Portion of Parcel K, Poinciana Plaza Housing Complex, Naval Air Station Key West, Key West, Florida; Naval Facilities Engineering Command Southeast; July 2014.	2011-Present	N/A

Project Details			
Name of Client	**United States Navy**	**Awarded Contractor**	
Client's Representative	**David Criswell**	**Contractors Representative**	
Address	**203 S. Davis Drive, Bldg 247 Joint Base Charleston, SC 29404**	**Address**	
Phone	**843-963-4991**	**Phone**	
Email	**david.criswell@navy.mil**	**Email**	
Design Service Fee	**$83,800**	**Contract Award Amount**	
Estimate of Const Cost	**$76,200**	**Final Cost**	
Key Personnel Involved: *Shauna Stotler-Hardy, Chuck Bryan*			

Tetra Tech has been contracted by the Department of the Navy, Naval Facilities Engineering Command Headquarters, Base Realignment and Closure (BRAC) Program Management Office (PMO) to perform a Five-Year Review for six BRAC environmental sites located on properties formerly owned by the Navy at Naval Air Station (NAS) Key West, Florida.

Six NAS Key West sites (Hamaca Hawk Missile Site Sewage Lift Station, Truman Annex DRMO Waste Storage Area, the Truman Annex Former Location of Building 136, Truman Annex Building 223 Former Hazardous Waste Storage Area, Poinciana Plaza Housing, and the City of Key West-Owned Portion of Truman Annex Parcel K) are BRAC sites regulated under CERCLA. Five-Year Reviews are required by CERCLA and the NCP when hazardous substances, pollutants, and contaminants remain in the environment and limit use of the site. This is the first Five-Year Review for NAS Key West BRAC sites.

The purpose of the Five-Year Review is to determine whether the remedies at the six BRAC sites are protective of human health and the environment. The methods, findings, and conclusions of the reviews are documented and reported to FDEP. In addition, the Five-Year Review identifies issues found during the review, if any, and presents recommendations to address them.

Additional environmental investigations and remedial actions were performed at these BRAC properties during 1997-2000. Remedies for all sites are documented in the Part B Permit for RCRA sites and Decision Documents for CERCLA and BRAC sites; the remedies for the sites vary and include, at a minimum, land-use controls (LUCs). Several of the sites also include long-term monitoring as part of the remedy. The remedies in place at the various NAS Key West BRAC sites are expected to be protective of human health and the environment.

This Corrective Action Effectiveness Evaluation/Five-Year Review demonstrates that the Navy is meeting or exceeding the requirements of the Decision Documents for NAS Key West BRAC sites and is constantly re-evaluating the utilization of alternative treatment technology options and more permanent remedies. Current remediation activities are provided by the Remediation Action Contract contractor. This provides the Navy with no conflict of interest between each contractor's scopes of work.

Title and Location of Project	**Years Completed**	
	Professional Services	**Construction Services**
Long-term Monitoring and Treatability Study and Site Rehabilitation, Naval Air Station Key West, Key West, Florida; Naval Facilities Engineering Command Southeast	2010-2014	N/A

Project Details			
Name of Client	**United States Navy**	**Awarded Contractor**	
Client's Representative	**Brian Syme**	**Contractors Representative**	
Address	**PO Box 30 BLDG 135 NAS Jacksonville, Florida 32212**	**Address**	
Phone	**904-542-6151**	**Phone**	
Email	**brian.syme1@navy.mil**	**Email**	
Design Service Fee	**$158,600**	**Contract Award Amount**	
Estimate of Const Cost	**$157,700**	**Final Cost**	
Key Personnel Involved: *Shauna Stotler-Hardy*			

Tetra Tech was contracted by the Department of the Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) to conduct Long Term Monitoring (LTM) semi-annual sampling at the Boca Chica Tank Farm (BCTF) located at Naval Air Station (NAS) Key West. Periodic groundwater monitoring is a component of the monitored natural attenuation (MNA) remedy for the BCTF. Groundwater monitoring will also document any changes in the contaminant plume. The site is currently being evaluated for site rehabilitation based on alternative cleanup criteria documented through four semi-annual sampling events and monitoring well replacement.

Tetra Tech was contracted to prepare a Contamination Assessment Plan (CAP) Addendum discussing the work done at Boca Chica Tank Farm and Sigsbee Annex Marina. The CAP Addendum will contain a site description, site history, layout of the site, monitoring wells and soil borings using the information on record and acquired during the site visit, the site background information, the technical approach, a description of the previous field activities, along with project milestones and time-frames to include the dates of all major events and a list of personnel scheduled for field work.

Tetra Tech was contracted to monitor groundwater at the Sigsbee Annex Marina for petroleum constituents. The marina lies within a small cove that is open to Florida Bay and had a fuel leak at the pumping station. Tetra Tech oversaw the remediation of soil and monitoring of the groundwater. In 2014, the site received a Site Rehabilitation Completion Order from FDEP for petroleum related contamination and was restored to like new conditions suitable for public use.

"Contractor has made major strides in improving overall performance goals and meeting time line within budget. The quality of work is produced and executed in a professional manner with minimal errors. Lines of communication between the Navy and contractor POC are responsive to all aspects of the project."

-NAVFAC SE Interim ACASS Rating

Title and Location of Project	**Years Completed**	
	Professional Services	**Construction Services**
Kennedy Athletic Recreation & Social Park I **Kennedy Space Center, Florida**	2003-2014	2004-2008

Project Details			
Name of Client	**NASA**	**Awarded Contractor**	**Tetra Tech Inc.**
Client's Representative	**Michael Deliz, PG**	**Contractors Representative**	**Mark Speranza, PE**
Address	**NASA, TA-A4B** **Kennedy Space Center, FL 32899**	**Address**	**661 Andersen Drive** **Pittsburgh, PA 15220**
Phone	**321-867-6971**	**Phone**	**412-921-8916**
Email	**michl.j.deliz@nasa.govae**	**Email**	**Mark.Speranza@TetraTech.com**
Design Service Fee	**$1.4 Million**	**Contract Award Amount**	**$8,000,000**
Estimate of Const Cost	**$6.6 Million**	**Final Cost**	**$7,600,000**
Key Personnel Involved: *Mark Speranza, Chris Neumann, Mark Jonnet*			

Tetra Tech, conducted this design/build project at the Kennedy Athletic Recreation & Social Park I (KARS Park) for Kennedy Space Center (KSC). KARS Park is located within the Merritt Island National Wildlife Refuge. The project goal was to remove soil contaminated with polynuclear aromatic hydrocarbons (PAHs), total recoverable petroleum hydrocarbons (TRPH), lead, arsenic, and chromium from areas within KARS Park that were accessible to park visitors. The soils were remediated to achieve unrestricted reuse by removing all contaminants to concentrations equal to or less than their Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs). Prior agreement with FDEP indicated that remediation to these concentrations would also be protective of ecological receptors.

Prior to the start of construction, Tetra Tech performed a wetland delineation within and adjacent to the project area. Approximately 1.9 acres of wetlands were identified within the project limits. Tetra Tech prepared a Joint Application for an Individual Environmental Resource Permit for NASA to submit to St. Johns River Water Management District (SJRWD). As part of the permit application, Tetra Tech developed a wetland mitigation plan to replace the wetlands impacted during the project.

The project was conducted over three phases because of funding restrictions. Phase I included demolition of all existing structures associated with a historic Gun Range, removal of miscellaneous debris, removal of abandoned vehicles/heavy equipment, and excavation of 23,542 cubic yards of contaminated soil. Clearing and grubbing was conducted, and silt fence was installed around the perimeter of the excavation areas. All utilities to buildings that were to be demolished were located and disconnected. All special wastes (e.g., refrigerants, ballasts, mercury vapor lamps, and light bulbs) were removed and properly disposed along with 7 cubic yards of asbestos-containing material. All debris and soil were properly disposed off site in one of three landfills depending on acceptance criteria. At the completion of the remediation effort, FDEP concurred with no further action for the areas remediated.

Phase II included a Pilot-Scale Study (PSS) to demonstrate a process to treat characteristically hazardous lead-contaminated soil from a portion of the skeet range to universal treatment standards (UTS) using a phosphate-based additive. Following treatment and verification of UTS limits, soil from the affected areas (totaling 4,440 cubic yards) were properly disposed off site. In addition, 15,594 cubic yards of untreated soil from other areas were excavated and properly disposed. Following excavation and disposal activities, all disturbed areas were backfilled. Topsoil was placed to support vegetation and the site was seeded. FDEP also concurred with no further action for the areas of the site remediated under Phase II.

Phase III also utilized the phosphate-based additive to treat characteristically hazardous lead-contaminated soil. Following treatment and verification of UTS limits, a total of 8,199 cubic yards was properly disposed off site. In addition, approximately 17,054 cubic yards of untreated soil from other areas were excavated and properly disposed.

Following remediation activities, Tetra Tech supervised the installation of the mitigated wetland. In addition to the design, permitting, and construction services provided for this project, Tetra Tech performs annual site inspections to assess the overall condition of the mitigation wetland and evaluate the presence and extent of exotic species within the constructed wetland over the required three-year monitoring period. Results of the annual monitoring inspections are summarized in a report and forwarded to NASA for submission to the (SJRWMD). Tetra Tech achieved the wetland mitigation criteria set forth in the permit in 2013. Currently, Tetra Tech performs bi-annual monitoring of groundwater.

Title and Location of Project	Years Completed	
	Professional Services	Construction Services
Florida Dept. of Environmental Protection – Hazardous Waste Cleanup Contract Sites throughout Florida	1996-2021	1999-2021

Project Details			
Name of Client	**FDEP**	**Awarded Contractor**	**Multiple**
Client's Representative	**John Sykes**	**Contractors Representative**	
Address	**2600 Blair Stone Road**	**Address**	
	Tallahassee, FL 32399	**Phone**	
Phone	**(850) 245-8960**	**Email**	
Design Service Fee	**$500,000**	**Contract Award Amount**	
Estimate of Const. Cost	**$5,000,000**	**Final Cost**	
Key Personnel Involved in Design: *Jay McGovern, Trevor Nobile, Mike Jaynes*			

Responsible for coordinating, managing, and supervising the implementation of site assessments and remedial actions at 35 drycleaning and 10 orphaned hazardous waste sites. We have been awarded over 700 Task Assignments (work orders) to date for $15.5 million. In addition, over 500 Change Orders were negotiated and issued for changed conditions.

We have received site closure at 29 facilities through active remediation, monitored natural attenuation, and no further action. In addition, we serve our client by providing value engineering; following are examples:

- At the Skippers III Plating Facility, Cocoa, FL. Tetra Tech provided turnkey remedial engineering and construction management services associated with the demolition of the former plating facility and an ancillary structure, and the removal of the top two feet of arsenic contaminated soils. As a direct result of our construction management of the remedial activities, the project was completed under budget, by ~$7,000, and ahead of schedule. In addition, technical objectives were surpassed.
- At the Vicks Drycleaners facility in Pensacola, we removed ~ 800 tons of contaminated soil located under the drycleaning facility. The PCE contamination was the result of a release of spent solvent (F002) onto the ground. Based upon this knowledge, it appeared that source removal would require the management of an environmental media contaminated with a listed RCRA waste. However, our regulatory specialists researched alternative land disposal restrictions (LDRs) treatment standards for contaminated soils in 40 CFR 268.49. The regulations allowed the disposal of the soils as solid waste because the concentrations of PCE and TCE were up to 10 times the Universal Treatment Standards, which resulted in disposal cost savings of $190,000 for FDEP.
- Coordination of field data collection activities at several sites sequentially or concurrently with additional staff and subcontractors to achieve schedule objectives, minimize mobilization costs, and distribute equipment and per diem costs between sites. This also permits subcontractor costs to be minimized, reduces time between field mobilizations and expedites the completion of the SA, thus moving the sites to construction more rapidly.
- The reuse of capital equipment at multiple drycleaning sites after cleanup is completed. Our designs included multiple inlet treatment system legs able to operate up to 14 separate extraction wells in one enclosed trailer. As a way to provide the FDEP with value engineering, each SVE design was only slightly modified from the original. This produced ~$3,000 in savings on engineering costs, $1,000 in

capital costs (blower sizing) and over $4,000 in operating costs for each system. These systems are easily modified when moved to another site.

- The City of Palm Beach Gardens wanted a Development Application fee of $2,000 for the SVE system. However, working together with the FDEP's PM and the City, Tetra Tech was able to obtain a waiver, allowing the project to proceed directly to the Building Department for the necessary permits, saving FDEP time and money.

Title and Location of Project			Years Completed	
			Professional Services	Construction Services
Pomcor Longview, LLC– Shady Oaks Site, Lake Wales, FL			2010-2015	2013
Project Details				
Name of Client	**Pomcor Longview, LLC**	**Awarded Contractor**	**RCS Excavation, Inc.**	
Client's Representative	**Peter Burnett**	**Contractors Representative**	**AJ Smith**	
Address	**3700 Bank of America Plaza**	**Address**	**851 Lake June Road**	
	101 East Kennedy Blvd., Tampa, FL 33602		**Lake Placid, FL 33852**	
Phone	**(813) 227-8497**	**Phone**	**(863) 699-1727**	
Design Service Fee	**$15,000**	**Contract Award Amount**	**$93,900**	
Estimate of Const. Cost	**$195,000**	**Final Cost**	**$93,900**	
Key Personnel Involved: *Jay McGovern, Trevor Nobile*				

The purpose of this project included the remedial measures necessary to protect human receptors and close the former disposal areas. The remedy included "closure," following the FDEP *Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida* (February 3, 2011), comprising 24" of soil cover, institutional controls, and groundwater monitoring. Specifically, the objective was to seek Risk Management Options Level II – No Further Action with institutional controls and engineering controls (e.g., deed restrictions and cap). The limits of the former disposal areas considered soils that exceeded residential direct exposure guidelines established under Chapter 62-777, F.A.C. Soil Cleanup Target Levels as well as visual observations of waste material.

The following activities, associated with the construction and implementation, were performed in accordance with the FDEP approved Remedial Action Plan (RAP):

1. Permits;
2. Mobilization and Pre-Construction Meetings;
3. Monitoring Well Abandonment;
4. Erosion and Sediment Pollution Controls;
5. Capping Activities;
6. Site Restoration; and
7. Monitoring Well Replacement and Installation.

The above activities were performed during the period of January 2013 through May 2013. Site photographs depicting the work completed and daily construction reports are provided. Three Volvo A25F off-road haul trucks, each with an approximate capacity of 20 cubic yards (cy), were used to move fill material from the on-site borrow pit to each of the disposal areas. Over 13,000 cy of material was moved from the on-site borrow pit to each of the disposal areas.

In accordance with the RAP, material was placed in maximum lifts of 12" followed by vibratory compaction to achieve a finished grade that was two feet higher than the existing topography. Compaction testing was conducted for each lift. All results were passing the minimum 95% compaction with respect to maximum dry density requirement.

A final survey was conducted to verify that final elevations meet the design requirement. Toe of slope spot elevations and two transects were surveyed at each of the former disposal areas. Spot elevations and associated cross-sections indicate that the minimum two foot of soil cover was established at each of the former disposal areas.

Title and Location of Project	**Years Completed**	
	Professional Services	**Construction Services**
Environmental Report and Final Safety Analysis Report in support of the Turkey Point Units 6&7 COLA, Florida Power & Light, Homestead, Florida	2008-Ongoing	N/A

Project Details			
Name of Client	**Bechtel Power Corporation**	**Awarded Contractor**	
Client's Representative	**Tom Hornyak**	**Contractors Representative**	
Address	**Bechtel Power Corporation 5275 Westview Drive Frederick, Maryland 21703**	**Address**	
Phone	**301-228-7279**	**Phone**	
Email	**tehornya@bectel.com**	**Email**	
Design Service Fee	**$3,654,340**	**Contract Award Amount**	
Estimate of Const Cost	**$3,740,000**	**Final Cost**	
Key Personnel Involved: *Shauna Stotler-Hardy*			

Tetra Tech was contracted Bechtel Power Corporation to prepare requested sections of the Environmental Report and Final Safety Analysis Report in support of the Turkey Point COL application. Report preparation included furnishing and supervision of all technical personnel, labor, and any equipment, materials, tools, supplies, and transportation required to successfully complete the work in accordance with the requirements of subcontract documents. The Environmental Report addressed the technical information in the following areas:

- Purpose of the facility and associated transmission systems (Chapter 1),
- Site and environmental interfaces (Chapter 2),
- Description of the plant design and site development plans (Chapter 3),
- Environmental effects of site preparation, station construction, and transmission systems (Chapter 4),

- Environmental effects of station operation (Chapter 5),
- Economic and social effects of station construction and operation (Chapters 4 and 5),
- Effluent and environmental measurements and monitoring (Chapter 6),
- Environmental effects of postulated accidents involving radioactive material (Chapter 7),
- Need for power (Chapter 8),
- Alternatives, including no-action, alternate energy sources, alternative sites, and alternative transmission systems (Chapter 9),
- Cost/benefit analysis (Chapter 10)

The COLA and Environmental Report were submitted to the U.S. Nuclear Regulatory Commission on June 30, 2009. Bechtel and FPL are currently waiting for the NRC to release the Draft Environmental Impact Statement so that Tetra Tech may review it for the clients.

Tetra Tech has provided environmental surveying and ecological support at Florida Power & Light Turkey Point Power Plant which lies directly on the coast of Biscayne Bay National Park, and east of the Florida Everglades. Turkey Point is also critical habitat for the American Crocodile, Indigo Snake, Florida Burrow Owl and several other species. Tetra Tech terrestrial ecologists conducted quarterly surveys of birds, amphibians, reptiles, small mammals, and T&E species on the 10,000 acre Turkey Point site and along existing/proposed transmission corridors. Tetra Tech botanist conducted surveys of T&E plant species over the entire Turkey Point site and along existing/proposed transmission corridors. Tetra Tech aquatic biologists also conducted surveys of fish in on-site ditches, cooling canals, and mangrove wetlands that could be impacted by new plant construction to allay NRC and resource agency concerns about the possible presence of sensitive fish species. . The terrestrial and aquatic surveys provided a baseline against which potential impacts of building and operating the new units were evaluated in the Environmental Report. Tetra Tech was contracted by the state of Florida to conduct sea grass surveys in Biscayne Bay that were utilized as reference material for the Turkey Point Environmental Report.

Title and Location of Project			**Years Completed**	
			Professional Services	**Construction Services**
Fort pierce Marina and Storm Protection Islands Design and Construction Management Services, Fort Pierce, FL			2005-2014	2011 - Ongoing
Project Details				
Name of Client	**City of Fort Pierce**	**Awarded Contractor**	**Lucas Marine Construction**	
Client's Representative	**Edward Seissiger**	**Contractors Representative**	**Wade Diekman**	
Address	**100 North US Highway 1 For Pierce, FL 34954**	**Address**	**3130 SE Slater Street Stuart, FL 34997**	
Phone	**772-460-2200 x 157**	**Phone**	**(772) 286-5094 Ext. 304**	
Email	**Eseissiger@city-FtPierce.com**	**Email**	**wdiekman@lmcllc.net**	
Design Service Fee	**$5 million**	**Contract Award Amount**	**$12.5 million**	
Estimate of Const Cost	**$18.8 million**	**Final Cost**	**$13 million**	
Key Personnel Involved: *Richard Czlapinski, Jayne Bergstrom, Georgia Vince, Brian Proctor, Stuart McGahee, Patrick Zuloaga*				

Tetra Tech was selected to design, permit and perform construction management services, including Construction Engineering Inspections (CEI) for the City of Fort Pierce Marina and Storm Water Protection Islands.

In the fall of 2004, the City of Fort Pierce marina was completely destroyed by Hurricanes Frances and Jeanne. The marina comprises a boat basin of 21 acres and is a vital component of the City's waterfront redevelopment efforts. The City retained Tetra Tech to handle the design and permitting of the reconstruction and expansion of the City of Fort Pierce Marina, as well as temporary facilities to protect the interior marina while the outer marina and its associated wave protection components are constructed.

Tetra Tech has designed an island breakwater system to provide wave and current protection for the marina. The protection system includes an artificial island complex that will serve as a first line breakwater system and will include mangrove plantings, tidal lagoon features and an artificial reef area. The island system will also involve the beneficial reuse of dredged material. The design of the islands incorporated hydrodynamic modeling, field data collection and sampling, turbidity modeling, and a scaled physical model to ensure the island design would withstand a 100 year storm. The development and approval of this project required close coordination with FEMA, the U.S. Army Corps of Engineers and Florida Department of Environmental Protection and provided significant regulatory challenges

CEI services for the project including weekly underwater inspections, above water surveys, reviewed work plans, RFI's, acceptance reviews and meetings with the City and consultants performing the activities including the seagrass, mangrove and dune vegetation mitigation components. Tetra Tech successfully reduced and eliminated change orders during the implementation of the Fort Pierce Marina and Storm Protection Islands project. This was achieved by ensuring a shared vision with the City of Ft. Pierce, the design engineer and the various contractors working on the project. Weekly team meetings were held to address issues and to ensure the scope of work and level of effort were understood by all parties. The weekly meetings provided all parties the opportunity to clarify the expected scope, schedule and budget, thus ensuring all parties met the scope, schedule and budget. Through a value engineering exercise, Tetra Tech was able to provide $1,000,000 dollars in cost savings for the City of Ft. Pierce

Title and Location of Project			Years Completed	
			Professional Services	Construction Services
Manatee Pocket Navigational Dredging Martin County FL			2007-2010	2011-2012
Project Details				
Name of Client	**Martin County**	**Awarded Contractor**	**Dickerson Marine Construction**	
Client's Representative	**Kathy Fitzpatrick; County Coastal Engineer, Martin County Engineering Department**	**Contractors Representative**	**Jeff Ehrhard**	
Address	**Martin County Administrative Center 2410 SE Monterey Road Stuart, Florida 34996**	**Address**	**P.O. Box 910 Fort pierce, FL 34954**	
Phone	**772-288-5429**	**Phone**	**772-429-4444**	
Email	**kfitzpat@martin.fl.us**	**Email**	**JEhrhard@dfifl.com**	
Design Service Fee	**$1.4 Million**	**Contract Award Amount**	**$11 Million**	
Estimate of Const Cost	**$13.2 Million**	**Final Cost**	**$11,888,940**	
Key Personnel Involved in Design and Permitting: *Richard Czlapinski, Jayne Bergstrom, Georgia Vince*				

Manatee Pocket is a popular spot for local and visiting boaters and functions as a jumping off point for boats departing for the Bahamas or crossing the state through Lake Okeechobee. With immediate access to the Okeechobee Waterway (OWW) and the Intracoastal Waterway (ICW), the facilities were severely limited due to the shallow water depths existing in the Pocket. Considering the significant value of the Manatee Pocket as a working waterfront, it was critical that a remedy for this situation be found. As a first step, the County hired Tetra Tech EC to design a navigable waterway. The project goals included:

- increase the draft and size of vessels that will be able to access the Pocket
- define a channel to minimize impacts to adjacent shallow water areas and benefit manatee protection.
- remove detrimental muck sediments
- improve the ability of marine life to re-establish in the Pocket
- improve the water quality in the Pocket.

Tetra Tech provided Martin County public involvement support that included the design of a public involvement program, also included issuance of press releases, participation in radio talk shows, presentations to local business and political leaders at luncheons, email updates and maintenance of a project website. Tetra Tech provided all of the sediment and water quality sampling and testing, and design and permitting for this high-profile, 275,000-cubic-yard dredging project. Engineering products included developing and coordinating all

survey and mapping products and drawings, developing 3-D dredging plans and permit application drawings, data reduction and plotting of sediment isopach mapping from subbottom geophysical survey program, CDF, and dredged material treatment design. Since the area is heavily developed, there is no available land near the dredging areas that can serve as dewatering and disposal sites. The pipeline followed a complex route to the dewatering site that consists of waterway, County easements, public/private property and road crossings, and careful threading through a mangrove community. The program includes post-dredging material testing and evaluation protocol that will promote the beneficial reuse of the sediments. The anticipated permit time was 14 months; however, Tetra Tech expedited the permitting process and received all regulatory permits within 9 months to meet specific grant-funding timeline requirements. Tetra Tech also identified potential grant opportunities, completed grant applications on behalf of the County and assisted in presentations to grant application review panels. As a result of the grant application efforts, the County was able to obtain $12.6 million to help fund the $13.2 million project costs.

Principal elements and special features of the project

- Sediment characterization for transport and beneficial reuse
- Dredging feasibility and preliminary design
- Channel layout and design
- Applied for grant funding opportunities to offset costs for public client
- Fast-paced permitting within grant-funding timeline
- Public involvement activities
- Incorporated environmental enhancement features
- Successful grant program that provided $12.6 million of the $13.2 million project cost
- Regulatory agency coordination and stakeholder participation
- Fl. Association of Environmental Professionals Project Award

Title and Location of Project			Years Completed	
			Professional Services	Construction Services
National Park Services, Natural Resource Damage Assessment Program, Multiple Projects			2004-2014	2004-2014
Project Details				
Name of Client	**National Park Service, Biscayne National Park**	**Awarded Contractor**		
Client's Representative	**Amanda Bourque**	**Contractors Representative**		
Address		**Address**		
Phone	**786-335-3626**	**Phone**		
Email		**Email**		
Design Service Fee		**Contract Award Amount**		
Estimate of Const Cost		**Final Cost**		
Key Personnel Involved: *Patrick Zuloaga, Lisa Canty*				

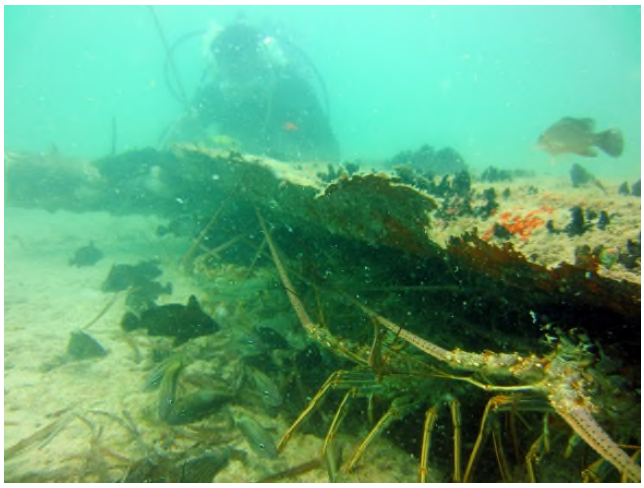
Tetra Tech has provided support to the NPS on the Natural Resources Damage Assessment Program (NRDA) and natural resource restoration projects on a continual basis since 1998 under several indefinite delivery/indefinite quantity (IDIQ) contracts and Tetra Tech's GSA Environmental Advisory Services FSS, contract number GS-10F-0208J. Key work has included technical support, environmental restoration planning and implementation, and data collection and subcontractor management. All task orders were completed at or under final negotiated budgets with several substantially under budget or with significantly more scope accomplished within the original budget limits. Tetra Tech primarily serves the natural resource Trustee community which is beneficial to the NPS in that there are fewer concerns regarding situations where there is a potential for organizational conflicts of interest (OCOI).

From late 2004 to the present, Tetra Tech has provided restoration planning and implementation services under several Task Orders within our larger GSA Environmental FSS. More specifically, and with direct relation to this NPS-BISC solicitation, Tetra Tech successfully completed Derelict Trap and Debris Removal projects in 2008, 2009, 2011, 2012 and most recently in August of 2013. All projects (2008, 2009, 2011, 2012, and 2013) were completed within budget and schedule while surpassing BISC's estimated derelict trap and debris recovery rates. During the 2008 Derelict Trap and Debris Removal project, Tetra Tech exceeded the recovery objective of 405 derelict traps/trap equivalencies by 64 percent (668 derelict trap and debris were recovered). In the following year (2009), the Tetra Tech Team exceed the recovery objective of 550 derelict traps/trap equivalencies removed by 77 percent (975 derelict trap and debris were recovered). Most recently in 2011, 2012, and 2013, the Tetra Tech team recovered an average of 90 traps per day exceeding the government estimate of 70 traps per day, thus completing the project ahead of schedule. Lessons learned through implementation of these projects will be integral to successfully completing this Derelict Trap and Debris Removal project. The key staff proposed for this project is the same staff that conducted the previous Derelict Trap and Debris Removal projects. Tetra Tech is confident that the methods and techniques refined while implementing these previous projects will serve to successfully implement this Derelict Trap and Debris Removal project.

From 2007 to 2010, Tetra Tech staff has worked on five separate task orders related to coral reef restoration. These projects include a variety of vessel groundings including the Allie B, Igloo Moon, M/Y Natalita III, M/V Halcyon, M/V Platinum, and a confidential grounding site. Assessment and/or restoration activities were conducted at these vessel grounding sites, with activities performed to BISC specifications. Project activities were performed following BISC and NPS guidelines and with an emphasis on avoidance and minimization of collateral impacts to the surrounding resources. All task orders were performed within schedule and budget. In 2007 and 2009, Tetra Tech successfully planned and completed seagrass restoration activities at multiple vessel

grounding sites in BISC. The projects were conducted in two phases. Phase I consisted of planning field implementation, which included coordination with NPS and BISC staff, gathering current site-specific data, preparing a summary report of the quantitative data, and developing a detailed Field Implementation Plan that supplemented the Restoration Plan prepared by BISC. In 2007, Tetra Tech provided regulatory knowledge and assistance with obtaining pre-and post-restoration permit documentation. Sediment chemistry evaluation was a key factor in developing sediment mixtures to achieve compatible fill requirements. Phase II consisted of the restoration implementation, which consisted of sediment preparation, transportation and placement of fill, fabrication and installation of bird stake, or fertilizer incorporation, followed by seagrass harvesting and transplantation (2007 project only). The implementation plan and final restoration actions were completed in accordance with the regulatory requirements of approved letters, permits, and specifications of the RP. Tetra Tech managed seagrass restoration projects (2007), met project schedules and deadlines successfully, and controlled costs on the job.

Title and Location of Project		**Years Completed**	
		Professional Services	**Construction Services**
NOAA Restoration Center & Florida Keys National Marine Sanctuary "Casitas" Project		2014	2014
Project Details			
Name of Client	**NOAA Restoration Center**	**Awarded Contractor**	**N/A**
Client's Representative	**Sean Meehan**	**Contractors Representative**	
Address	**NOAA Southeast Regional Office 263 13th Ave. South St. Petersburg, FL 33701**	**Address**	
Phone	**727-385-5202**	**Phone**	
Email	**Sean.meehan@noaa.gov**	**Email**	
Design Service Fee	**$ 554,893**	**Contract Award Amount**	
Estimate of Const Cost	**N/A**	**Final Cost**	
Key Personnel Involved in Design and Permitting: *Patrick Zuloaga, Lisa Canty*			



NOAA's Restoration Center and the Florida Keys National Marine Sanctuary (FKNMS) partnered to remove illegal lobster condos or "casitas" within the waters of the FKNMS. Casitas are simply a flat sheet of waterproof material (steel, cement, tin, etc.) propped 4-6" above the seafloor on cement parking blocks or similar structures, creating an illegal habitat for lobster. These casitas smother the seafloor by shading out the substrate and concentrate lobsters allowing for increased harvest through illegal fishing. Florida law prohibits harvesting spiny lobster on non-permitted artificial structures. In addition, these condos violate FKNMS dumping regulations as well as cause destruction of natural resources. In 2007, NOAA technicians conducted the side scan sonar survey over an area approximately 12 square miles north of the lower Keys to locate the illegal fishing gear. NOAA contractors visited over 100 target sites and removed over 60 of the illegal

structures from the seafloor. The debris was measured for surface area, brought to the surface and then transported to shore for disposal on land. In 2008, NOAA identified mapped 13 km^2 of seafloor and identified and removed more illegal casitas from the seafloor. To date, almost 100 tons of illegally dumped material has been removed from the marine environment.

On behalf of NOAA Tetra Tech is conducting the removal of marine debris that has been illegally dumped on the seafloor. The area of work includes the north side of the Lower Florida Keys from approximately Big Pine Key through Key West in 15' to 35' of water. Tetra Tech commercial and scientific divers and equipment navigate to the identified targets, deploy divers to attach cables and/or lift bags to bring the casitas to the surface, use a lifting device to lift casitas onto a floating platform/vessel, transport debris to shore, and remove debris to an approved landfill facility outside of the Florida Keys. Tetra Tech is providing all materials, equipment, and services needed to remove debris from the seafloor and have it removed from the Florida Keys National Marine Sanctuary.

Additionally, as the debris is located and inspected, divers are removing individual coral units and relocating them to natural reef areas. All coral relocation is being done in accordance with NOAA practices and is being documented. All work efforts comply with all applicable Federal and state safety and health standards and Regulations applicable to this work, including but not limited to the Occupational Safety and Health (OSHA) Act, 29 U.S.C § 651 et seq.

Title and Location of Project			**Years Completed**	
			Professional Services	**Construction Services**
Environmental Management for Port of Miami Deepening and Widening Project, Miami Florida			2014-Ongoing	2014-Ongoing
Project Details				
Name of Client	**U.S. Army Corps of Engineers**	**Awarded Contractor**	**Great Lakes Dredge and Dock Company**	
Client's Representative	**Terri Jordan-Sellers**	**Contractors Representative**		
Address	**701 San Marco Blvd. Jacksonville, FL 32207**	**Address**	**2122 York Road Oak Brook, IL 60523 USA**	
Phone	**904-232-1817**	**Phone**	**630-574-3000**	
Email	**Terri.Jordan-Sellers@usace.army.mil**	**Email**		
Design Service Fee	**$20 Million**	**Contract Award Amount**	**$190 Million**	
Estimate of Const. Cost	**$190 Million**	**Final Cost**	**On-going**	
Key Personnel Involved in Design: *Michael Barnett, Richard Czlapinski, Jesse Davis, Dawn McCullough*				

Tetra Tech was awarded a $20 million contract with the Great Lakes Dredge & Dock Company, LLC (GLDD) as the Prime Contractor (End Client is the USACE, Jacksonville District) to conduct environmental management and quality control/quality assurance reviews and reporting to the USACE, FDEP, and federal and state resource agencies for the approximately 2-year duration Miami Harbor Construction and Deepening Dredging Project. The Port of Miami is the first port in the southeastern United States to initiate dredging operations to expand its capacity to accommodate the larger shipping vessels anticipated from the expanded Panama Canal.

Tetra Tech's scientists will provide environmental management and quality control oversight for the transplanting of seagrasses, relocation of corals, and monitoring of existing seagrass beds, coral reefs and sedimentation during dredging activities. Tetra Tech's engineers will also subcontract and manage the construction of new artificial reefs and seagrass beds created from the dredged material.

The base contract authorizes the dredging of approximately 5 million cubic yards of sediment and unconsolidated material from the federal channel to depths of -50 feet (ft) mean low, low water (MLLW), with the outer Cut to -52 ft MLLW, with one foot allowable overdepth in all stations within the federal channel. Tetra Tech will oversee mitigation components to offset unavoidable impacts to aquatic resources including construction of 9.28 acres of low-relief and high-relief artificial reef comprised of quarry-sourced limestone from Miami-Dade County. Reefs are being constructed 2.4 miles offshore in water depths of 42 – 45 ft MLLW. Additionally responsible for task management of placement of approximately 60,000 cubic yards of 'select' fill (clean sand with a low percentage content of fine-grained sediments) to cap a base fill layer of dredge spoil material in a large dredge hole in Biscayne Bay (just north of the Julia Tuttle Causeway) located north of the Port of Miami.

Management Approach

Tetra Tech's organization for this contract, which is presented in the above sections, is designed to be flexible to allow the integration of project-specific needs. The Project Manager will have ultimate responsibility for technical content, quality, and adherence to schedules and cost performance for Tetra Tech and its subcontractors. The Project Manager is the single point of contact between Tetra Tech and the City of Key West. The Project Manager will be supported by Technical Leads assigned to a specific expertise that will support the Project Manager as needed.

Technical Leads will report directly to the Project Manager and are responsible for the day-to-day management of staff resources in the execution of the deliverables. Our Project Manager has specialized experience in managing projects of similar size and scope to those anticipated under this contract. Resumes are provided in Appendix A. In addition to these personnel, Tetra Tech has a national resource pool of more than 390 experienced Project Managers from which to draw upon.

Tetra Tech's experienced QC Manager, Health & Safety Officer, and Contract Administrator, will provide QC, Health & Safety, and contracting support, respectively, to Project Managers and Key Technical Support Staff, as required for each proposal or DO. The QC Manager will ensure that corporate and program quality assurance procedures for laboratory analysis and design are followed in all assignments. The Health & Safety Officer will provide the technical expertise necessary to ensure that all activities are conducted in a responsible manner with respect to health and safety. All of the requisite infrastructure (management/technical policies and procedures, management information systems, contract administration policies and procedures, health & safety program, and training) necessary to ensure staff proficiency are in place.

Tetra Tech recognizes that this is an environmental and coastal engineering contract with Work Orders requiring a variety of skills and manpower. To support this contract, Tetra Tech brings key staff that have direct or comparable experience committed to helping the City succeed. This group is further supported by an extensive staff of nearly 600 employees in Florida, and support staff company-wide. The availability of key personnel will be balanced with the City's requirements and has the capacity to fluctuate (increase or decrease) over time as project load changes. Tetra Tech is committed to providing Work Order Managers, discipline leads and other required support staff to meet any assignment and workload requirements.

Project Scheduling and Ability to Meet Established Deliverable Dates

Tetra Tech has repeatedly demonstrated the ability to comply with performance schedules, even when clients adjust milestones to meet more aggressive project goals or expand the scopes of their projects. Our approach is founded on development of a work breakdown structure (WBS) that organizes detailed work elements into a logical time sequence. This WBS is schedule driven with milestones for activities and decisions assigned and tracked on a continuous basis. The form of the schedule is tailored to the complexity and duration of the Work Order - a narrative "bullet" schedule for small short-duration tasks, to a project management schedule with full dependency logic for complex longer-duration assignments. The PMT (Project Management Team) will oversee the conformance to scheduled deliverable dates by the individual Work Order Managers.

Develop Designs that are Consistent with the Project Scope and Within Funding Constraints

Tetra Tech will always be mindful that we function as an extension of City staff, and we will actively seek City involvement as the project moves from concept to implementation. The City implements many projects large and small, all defined or constrained by evolving program plans, guidelines, and mandates. The scope and funding for projects addressed by Work Orders issued under this contract will need to conform to these established programmatic elements. Tetra Tech will utilize its strong, historic understanding of the City's programs along with up-front staff consultations to guide development of design criteria and requirements to meet City technical needs and funding constraints. Tetra Tech calls this approach to tasking as achieving Shared Vision®. The primary means of achieving Shared Vision® for design development is Tetra Tech's use of a design criteria document, which is a "living" document that serves as the basis for design. Through on-board reviews and document approval with the City, we can jointly work to revise the design criteria document and in turn develop designs that are consistent with the project scope and funding constraints, even as those evolve and change.

Shared Vision®

The first key element of Tetra Tech's Project Management approach is to reach a Shared Vision® with the City. As part of this process, we will hold pre-Work Order meetings with program and technical staff, and possibly other stakeholders, to define specific objectives and constraints of the project. For example, there may be trade-offs possible between a project's construction scope and its operating needs. Placing more or higher quality engineered elements into the constructed product could reduce the O&M requirements. Understanding these constraints will lead to a design that meets construction budget requirements while also meeting expectations for the ensuing program.

We will implement Shared Vision® throughout the design stage. As the design begins key assumptions, constraints (including construction and O&M funding), and design criteria are formally established. The City will be involved in development, review and approval of this framework to guide the design process. As the design reaches successively higher stages of completion, the City will be interactively involved in review and decision-making at the detailed level. The result of this interactive process is a design product that has buy-in from the City as consistent with project scope and meeting funding constraints.

QA/QC for Small, Medium and Large Projects

Tetra Tech will integrate quality management vertically throughout the project team by a systematic, multi-tiered process that permeates both the attitude of team members and the management of the processes used to execute any Work Order. This will be accomplished through the following internal programs:

Coordination with City Staff and Other Governmental and Private Stake Holders

The City operates in an arena of continual evolution with respect to issues and challenges, public policy and regulation, funding constraints and opportunities, and stakeholder interests. This includes constant pressure to achieve its growing mission with fewer resources. Tetra Tech will support the City's objectives by making the following partnering commitments:

- Close and continuous communication with City and Work Order management staff to identify and adjust to priorities.

- On-site, informal technical exchanges to discuss lessons learned, new ideas and technology transfer opportunities.
- Participation in City Council meetings, public meetings and workshops to stay informed regarding the City's priorities and challenges.
- Proactive integration of stakeholder involvement to identify, alleviate and remove potential roadblocks, and to find synergies and win-win opportunities.
- Once a Work Order is received by Tetra Tech, the partnering efforts continue via involvement of our Project Manager, Shauna Stotler-Hardy, who will serve to ensure close and informed coordination among all project stakeholders. This will include providing the Work Order team with historical background for the assignment, and leading refinements to meet City's needs. During Work Order implementation, the PM will maintain weekly contact on Work Order status with the City for feedback and to ensure overall satisfaction. This partnering approach will continue through closeout of the Work Order to foster continuous improvement.

Quality by Qualifications. Key personnel and support staff will be assigned to WOs for which they are both qualified and experienced.

Quality by Performance Criteria and Specifications. The WO Engineer of Record will promulgate performance criteria and technical specifications for each WO task. The PM/Deputy PM will review submittals, samples and constructed products for conformance to assigned criteria and specifications.

Design Quality Management. This is an ongoing process that will begin with careful WO planning, including WBS development, budgeting and scheduling, staffing, analysis of applicable codes, communications flow, and development of a *Design QC Plan*. The *Design QC Plan* will be prepared for each WO and will incorporate City expectations and requirements, work completion checklists for all disciplines, routing for design reviews, and interfaces for estimating and construction review during design. City participation will be integral to the *Design QC Plan*.

Quality by Independent Review.

Independent reviews will be performed for all technical deliverables to ensure conformance to criteria and specifications, cost effectiveness, and constructability.

Client – Service – Quality (CSQ)

Tetra Tech is built on a unique, client-focused, Total Quality Management program that we call Client Service Quality (CSQ). The focus of this program is to create "very satisfied clients" by quickly and cost-effectively meeting their expectations of quality. By integrating the CSQ concept in all facets of our corporate policies and procedures, we provide the best value to our clients. CSQ embodies our corporate philosophy of Do It Right, which defines how Tetra Tech will do business.

The Do It Right principles, outlined below, incorporate compliance with laws and regulations, including health and safety guidance; compliance with the terms, scopes, schedules, and budgets of our contracts; providing the high quality services that our client expect; carefully planning work activities and following approved plans; communicating clearly and frequently with clients and staff, including all relevant parties in the decision-making progress; and finally, continuously seeking ways to improve our performance.

- First, it means that we will do our work with a great deal of attention to health and safety;
- Second, it means that we will comply fully with all laws and regulations pertaining to our business;
- Third, it means that we will comply with the terms, scope, schedule, and budget of our contract without client;
- Fourth, it means that we will provide our clients with the level of quality that they expect and pay for;
- Fifth, it means that we perform our work in a well-planned way, we will plan the work and work the plan;
- Sixth, it means that we will carefully communicate (internally & externally) and document the plan and execution of our work;
- Seventh, it means that we will gather data and make decisions in an inclusive way, seeking the advice and guidance of those who can contribute to or will be impacted by the decision; and
- Eighth, it means that we dedicate ourselves to continuous improvement in quality, cost-effectiveness, and client service.

Quality Assurance & Quality Control

Our approach to Quality Assurance/Quality Control (QA/QC) emphasizes operational responsibility for adherence to corporate and contract procedures. Most engineering and environmental service operations require the coordinated efforts of many specialized individuals. The best QA/QC plans integrate the contributions and requirements of everyone involved into clear, concise statements of what is to be accomplished, how it will be done, how it will be recorded and used, and by whom. These plans must provide understandable instructions to those who will implement work orders; such as the field sampling team, the analytical laboratory, modelers, data assessors, and the data reviewers. QA/QC is composed of

standardized, recognizable elements covering the entire project from planning, through implementation, assessment, to reporting of technical or scientific papers.

Project activities and types of data, from field measurements to laboratory analyses, are described in the project-specific documents; Sampling and Analysis Plans (SAPs) and Uniform Federal Protocol Quality Assurance Project Plans (QAPPs). Our QA/QC Program requires that an approved SAP and QAPP be in place prior to conducting any sample collection activities, ensuring that samplers have a prescribed set of sample collection procedures to follow in the field.

The individual elements of our QA/QC Program are presented in the specified order and grouped into four general groups. The four groups of elements and their intent are summarized as follows:

- **Project Management** – The elements in this group address the basic area of project management, including the project history and objectives, and the roles and responsibilities of the participants. These elements ensure that the project has a defined goal, that the participants understand the goal and the approach to be used, and that the planning outputs have been documented.
- **Data Generation and Acquisition** – The elements in this group address all aspects of project design and implementation. Implementation of these elements ensure that appropriate methods for sampling, measurement and analysis, data collection or generation, data handling, and QC activities (e.g., equipment calibration) are employed and are properly documented.
- **Assessment and Oversight** – The elements in this group address the activities for assessing the effectiveness of the implementation of the project and associated QA/QC activities. The purpose of assessment is to ensure that the Work Plan is implemented as prescribed.
- **Data Validation and Usability** – The elements in this group address the QA activities that occur after the data collection or generation phase of the project is completed. Implementation of these elements ensures that the data conform to the specified criteria, thus achieving the project objectives.

Appendix A
Resumes for Key Personnel

TETRA TECH

Shauna Stotler-Hardy
Project Manager

Ms. Stotler-Hardy has fourteen years of professional environmental experience. She has served in various roles and levels of responsibility from project manager to facility activity coordinator. She has managed DOD, DOE and commercial specific contracts that required management and coordination of numerous vendors and subcontractors. She has experience managing RCRA and CERCLA investigations and remediation activities. She has coordinated activities with the USFWS, FDEP, USNAVY, USACE and various states historical organizations including FL SHPO. She has performed environmental analysis in field, as well as managed environmental and technical operations, in workplaces requiring strict adherence to safety for chemical, hazardous and radiological protocols and quality assurance compliance in accordance with varying government agencies. She has managed construction projects for commercial facilities/clients. She has contributed to the preparation of a number of environmental reports to support remediation cleanup efforts at various federal facilities and new licensing of nuclear power plants.

Project Role:
Project Manager

Education:
BA, Chemistry, 2000,
Wesleyan College

Registrations/Certifications:
40-Hour OSHA Hazardous Waste Health and Safety Training; 06/1998

8-hour OSHA Hazardous Waste Health and Safety Annual Refresher Training; 10/2013

Project Management Training Level 1: 02/2011

Project Management Training Level 2; 11/2011

Office:
Stuart, Florida

Years of Experience:
14

Years with Tetra Tech:
6

EXPERIENCE

Facility Activity Coordinator, 2010- Present
Naval Air Station (NAS) Key West, Florida; NAVFAC SE/LANT; RCRA and CERCLA investigations/remediation
Ms. Stotler-Hardy is the Facility Activity Coordinator for Tetra Tech for RCRA, CERCLA, and Petroleum Program investigations at the Naval Air Station (NAS) in Key West, Florida, under CLEAN task order contracts. In this capacity, she provides technical oversight for project support, quality assurance for all technical and strategical activities, manages project control activities, and provides continuous improvement suggestions for executing the overall goals of the CLEAN projects. She also interacts with NAVFAC Atlantic, FDEP, SHPO, USFWS and NAS Key West clients, providing them with requested information and recommendations for project direction. The NAS Key West project involves all activities required for the successful performance of RCRA facility and CERCLA remedial investigations; and oversight of corrective and remedial actions at 16 RCRA and CERCLA sites. The project also covers complete site remediation support at 10 BRAC properties and five FDEP Petroleum Program sites (UST sites). She provides coordination between USFWS and NAVFAC activities for sites that include the endangered Lower Keys Marsh Rabbit habitat. She also participates and presents at the Annual NAS Key West Restoration Advisory Board meeting. Overall, Ms. Stotler-Hardy has overseen/managed scopes of work that amount to $15 million dollars of environmental investigation, assessment, remediation, and successful closure of sites spanning across Big Coppit Key, Boca Chica Key, Geiger Key, Key West, Fleming Key, Sigsbee Annex (Dredgers Key), Trumbo Point and Truman Annex.

Project Manager, 2011-Present
NAS Key West, Long-term Monitoring and Treatability Study
Ms. Stotler-Hardy managed the task order to perform semi-annual monitored natural attenuation sampling and produce a Contamination Assessment Plan at Boca Chica Tank Farm, and a treatability study to remove free-phase petroleum product from Bachelors Officer Quarters at Trumbo Point. The tank farm is currently being reviewed for site rehabilitation from FDEP. The treatability study was successful in removing all free-phase product using an absorbent sock from the rear loading operational area without interference to daily operations.

Project Manager, 2010-Present
NAS Key West, BRAC Five-Year Review and LUC Support
Ms. Stotler-Hardy managed the task order to prepare a Five-Year Review for six BRAC environmental sites located on properties formerly owned by the Navy at Naval Air Station (NAS) Key West, Florida. The six NAS Key West sites (Hamaca Hawk Missile Site Sewage Lift Station, Truman Annex DRMO Waste Storage Area, the Truman

Annex Former Location of Building 136, Truman Annex Building 223 Former Hazardous Waste Storage Area, Poinciana Plaza Housing, and the City of Key West-Owned Portion of Truman Annex Parcel K) are BRAC sites regulated under CERCLA. Five-Year Reviews are required by CERCLA and the NCP when hazardous substances, pollutants, and contaminants remain in the environment and limit use of the site. A Five-Year review is used to determine whether the remedies at the sites are protective of human health and the environment.

Project Manager, 2010-Present
NAS Key West, Preliminary Assessment/Site Investigation for Former U.S. Army Hawk Missile Geiger Key and Boca Chica Key
Ms. Stotler-Hardy managed the task order to perform a preliminary assessments based on research, interviews and reconstructing operational actions along with media sampling for a site investigation at the Hawk Missile Sites located on Geiger Key and Boca Chica Key. The Geiger Key site is a historical place that required additional attention in order to preserve the historical buildings and key land structures identified by State Historic Preservation Office (SHPO). The Boca Chica Key site is co-located with the NOAA radar tower and required additional geotechnical surveys to prevent any drilling or sampling through the fiber optic cables and power lines that power the radar. This site is currently being evaluated for site rehabilitation.

Project Manager, 2010-2014
NAS Key West, Long-Term Monitoring and Site Rehabilitation
Ms. Stotler-Hardy managed the task order to perform semi-annual monitored natural attenuation sampling at the Boca Chica Tank Farm; perform quarterly groundwater monitoring and sampling events at the Sigsbee Annex Marina; develop a Site Rehabilitation Completion Report for the Sigsbee Annex Marina site; and perform quarterly groundwater monitoring and a treatability study that managed product removal at the Trumbo Point BOQ. The Sigsbee Annex Marina site has been rehabilitated and restored for public use.

Project Manager, 2008– 2012
NAS Key West, Environmental Media Sampling and Additional Activities at Several Sites
Ms. Stotler-Hardy managed the task order for environmental sampling and monitored natural attenuation studies at the Boca Chica Flying Club, a chlorinated solvent site; biological sampling and risk assessment at SWMU 2 (pesticide site); monitored natural attenuation at SWMU 9 (chlorinated solvent site); limited media sampling at IR-21 and AOC-B (former storage and landfill sites, respectively); site closure of Valve Pit 8 (petroleum site) and SWMU 4 (former solvent/oil site); monitoring well abandonment; and provide maintenance for LUCIPs.

Deputy Project Manager, 2008-Present
Homestead, Florida; Florida Power & Light; Environmental Report in support of a Combined Construction and Operating Licensing Application; Turkey Point Units 6&7
Florida Power and Light submitted an application to construct and operate two additional nuclear units at the Turkey Point Power Plant site. Ms. Stotler-Hardy serves as Deputy Project Manager for the preparation of the Environmental Report (ER) supporting the Combined Construction and Operating Licensing Application (COLA), which was submitted in June 2009. Ms. Stotler-Hardy directed staff and operated as the liaison for Tetra Tech Inc. to Bechtel, Florida Power and Light and to the clients' subcontractors such as Westinghouse, JES, Golder, MACTEC and Janus. She managed the successful completion of production schedules and deadline events. Also, during unforeseen changes to the project, redirected staffs focus and appointed new authority to cover continual changing aspects of the project. She also performed project oversight and guidance to various entities within Tetra Tech and subcontractors for all work done.

TETRA TECH

Jay McGovern, P.G.
Geologist

Mr. McGovern has over 30 years of geologic, engineering, construction, and project management experience in commercial, governmental, industrial, and residential projects. Broad experience ranges from soil, sediment, rock, and hydrogeologic investigations and monitoring, field engineering, estimating, project management, remedial action construction, and project supervision.

Project Role:
Deputy Project Manager

Education:
BS, Environmental Studies/Geology, 1979,

Stockton State College

Registrations/Certifications:
Professional Geologist, FL, Number PG1487

40-Hour OSHA Hazardous Waste Health and Safety Training

SOP Sampling Training for Groundwater, Surface Water, and Wastewater; University of Florida

Office:
Stuart, Florida

Years of Experience:
34

Years with Tetra Tech:
20

EXPERIENCE

Program Manager, 1998 – Present
Florida Department of Environmental Protection (FDEP), Hazardous Waste Site Cleanup and Drycleaning Solvent Cleanup Program, Contracts HW333, HW509, & HW560, Various locations throughout the State of Florida, Program Manager.
Responsible for coordinating, managing, and supervising the implementation of site assessments and remedial actions at 35 drycleaning and 10 orphaned hazardous waste sites. The original contract (HW333) was for six years with two one-year options, both of which the FDEP exercised. The second contract (HW509) was for five years with a single five-year option, which the FDEP exercised. The third five year contract started in February 2011. We have been awarded over 600 Task Assignments (work orders) to date for $15 million.

We have received site closure at 24 facilities through active remediation, monitored natural attenuation, and no further action. In addition, we serve our client by providing proactive value engineering. The following are examples:

- At the Skippers III Plating Facility, Cocoa, FL. Tetra Tech provided turnkey remedial engineering and construction management services associated with the demolition of the former plating facility and an ancillary structure, and the removal of the top two feet of arsenic contaminated soils. As a direct result of our construction management of the remedial activities, the project was completed under budget, by ~$7,000, and ahead of schedule. In addition, technical objectives were surpassed.
- At the Vicks Drycleaners facility in Pensacola, we removed ~ 800 tons of contaminated soil located under the drycleaning facility. The PCE contamination was the result of a release of spent solvent (F002) onto the ground. Based upon this knowledge, it appeared that source removal would require the management of an environmental media contaminated with a listed RCRA waste. However, our regulatory specialists researched alternative land disposal restrictions (LDRs) treatment standards for contaminated soils in 40 CFR 268.49. The regulations allowed the disposal of the soils as solid waste because the concentrations of PCE and TCE were <10 times the Universal Treatment Standards, which resulted in disposal cost savings of $190,000 for FDEP.
- The City of Palm Beach Gardens, where Dryclean Pro Cleaners is located, wanted a Development Application fee of $2,000 for the SVE system. However, working together with the FDEP's Project Manager and the City, Tetra Tech EC was able to obtain a waiver, allowing the project to proceed directly to the Building Department for the necessary permits, saving FDEP time and money.

Project Manager, March 2013 – May 2013
South Florida Water Management District, Phase I and II Environmental Site Assessment, Lake Hicpochee Hydrologic Enhancement Project, Glades County, FL
Conducted, managed a Phase I and II Environmental Site Assessments on 1,500-acres of State of Florida TIITF property. The Lake Hicpochee TIITF property consists of approximately 270-acres of open pasture and native

upland grasslands that are used as cattle pasture. Approximately 120-acres of Dry Prairie exists onsite and consists of transitional areas between the uplands and wetland areas. The approximately 1,100-acres remainder appears to be wetlands with approximately 15-acres of open water (a portion of Lake Hicpochee) at the southeastern corner of the property. The Phase I ESA followed the Standard Practice for Phase-I Environmental Site Assessments as established by the American Society for Testing and Materials and was prepared for the sole use of the South Florida Water Management District, the U.S. Fish and Wildlife Service, and the United States Army Corps of Engineers.

Project Manager May 2012 – November 2012
South Florida Water Management District, Phase I and II Environmental Site Assessment, Lemkin Creek Stormwater Improvement Project, Okeechobee County, Florida, Tract No. NB100-012, Ferrell Property
Conducted, managed a Phase I and II Environmental Site Assessments on the Ferrell Sam T. property, which consisted of 116-acres of pasture and borrow pits. The Phase II ESA examined areas of potential concern that were described in the Phase I ESA and consisted of field investigations and sampling, side scan and magnetometry marine surveys, followed by laboratory analyses, documentation, and reporting of the results of the technical evaluations performed.

Project Manager, May 2012 – July 2012
South Florida Water Management District, Environmental Summary Report, Loxahatchee River Floway 3 Project
Managed the preparation of an overall summary report of previous environmental investigations performed by Tetra Tech, URS Corporation (URS), Professional Services Industries, Inc. (PSI), and WRS Infrastructure & Environment, Inc. (WRS) within the footprint of the project. The Environmental Summary Report was prepared for the sole use of the South Florida Water Management District (District) and the United States Army Corps of Engineers (USACE). The Loxahatchee River Floway 3 Project is located in unincorporated Martin County, FL encompassing approximately 8,000 acres that were previously cultivated or in a natural state. Relevant files were obtained from the District, URS, PSI, WRS, and Tetra Tech's archives to compile background information with respect to prior assessments, corrective action, regulatory concurrence, BMPs, restrictive covenants, and engineering controls.

Project Manager, March 2011 – June 2011
South Florida Water Management District, Phase I and II Environmental Site Assessment, Herbert Hoover Dike Properties, Palm Beach County, Florida, Tract No. HH104-012, Elaine Seager Property
Conducted, managed a Phase I and II Environmental Site Assessments on the Elaine Seager property, which consisted of two legs of a pond that were former quarry pits and approximately 12-acres of uplands that was a former vehicle junkyard. The Phase I ESAs followed the Standard Practice for Phase-I Environmental Site Assessments as established by the American Society for Testing and Materials and was prepared for the sole use of the South Florida Water Management District and the United States Army Corps of Engineers. The Phase II ESA examined areas of potential concern that were described in the Phase I ESA and consisted of field investigations and sampling, side scan and magnetometry marine surveys, geophysical surveys using electromagnetic and ground penetrating radar followed by test pits, laboratory analyses, documentation, and reporting of the results of the technical evaluations performed.

Project Manager, January 2011 – Present
Pomcor Longview, LLC, Shady Oaks; Site Assessment, Lake Wales, FL
Conducted a Site Assessment in accordance with Chapter 62-780.600, F.A.C., which includes researching the site history; investigating the site's surficial geology; performing soil borings; installing and developing monitor wells; and collecting soil and groundwater samples for field and laboratory analyses at the Former Waste Disposal Areas at the Shady Oaks Property. The Site Assessment addressed soil and groundwater Constituents of Interest (COIs) in the three former waste disposal areas at the Shady Oaks site: the Bone Yard Area, Disposal Area #1, and Disposal Area #2. Based on the results of the 2004 Phase I/II ESA, it was determined that each of these waste disposal areas was historically operated and closed without permits. A Remedial Action Plan (RAP) was developed to cap the disposal areas in placed coupled with restrictive covenants (i.e., deed restrictions). The FDEP approved the RAP in November 2012 and the remedial actions were conducted from February to May 2013.

TETRA TECH

Becky Serra PE

Stuart Office Lead Engineer

Ms. Serra has over 33 years of work experience in Florida in the analysis, design, and permitting of water management aspects (stormwater, water use and dewatering) and environmental impacts of large and small stormwater management systems for transportation, agricultural, residential land development, golf courses, industrial/commercial, mining, municipal, and utilities projects. She is routinely involved in the preparation of engineering studies, surface water management design, water control structure design, stormwater modeling, permit applications, permit processing with the various governmental agencies, wetland mitigation and preservation, coordination with land owners, developers, land planners, environmental scientists, hydrogeologists, and various governmental agencies. She is familiar with the regulatory process in Florida (FDEP, USACOE, SFWMD, SJRWMD, SWFWMD and numerous local agencies throughout South Florida). For the past 3 years, she has served as Deputy PM and now PM and Lead Inspection Engineer for the SFWMD Structure Inspection Program (above water and below water (FY11) and underwater (FY 12 - FY14)) of over 280 water control structures for the SFWMD.

Project Role:

QA/QC, Construction Bid and Technical Review

Education:

BS, Agricultural Engineering

Michigan State University

Registrations/Certifications:

Florida Professional Engineer No. 35624

Office:

Stuart, Florida

Years of Experience:

33

Years with Tetra Tech:

3

EXPERIENCE

Structure Inspection Program, South Florida Water Management District, District Wide (FY14: 10/2013 – 9/30/14)

PM and Lead Inspection Engineer for the underwater field inspection, data collection, deficiency cataloging, and reporting involving 79 water control structures (culverts, gated culverts, spillways and pump stations) for the SFWMD. Inspections aid the SFWMD in identification of structure deficiencies and generate recommendations for corrective actions to improve structure operation. Required to perform inspections and supervise Tt staff as well as multi-disciplinary team including diving and structural subcontractors. Project requires close coordination with the client and also between internal and subcontracted staff to schedule inspections, perform inspections, review structure deficiencies, compile information, write reports and meet project deadlines.

Structure Inspection Program, South Florida Water Management District, District Wide (FY 13: 10/2012 – 9/30/13)

PM and Lead Inspection Engineer for the underwater field inspection, data collection, deficiency cataloging, and reporting involving 40 water control structures (culverts, gated culverts, spillways and pump stations) for the SFWMD. Required to perform inspections and supervise Tt staff as well as multi-disciplinary team including diving and structural subcontractors.

Structure Inspection Program, South Florida Water Management District, District Wide (FY11 and FY12: 1/2011 – 9/2012) Deputy PM for the underwater field inspection, data collection, deficiency cataloging, and reporting involving over 165 water control structures for the SFWMD. Supervised Tt staff as well as 3 multi-disciplinary teams including diving, electrical, mechanical and structural subcontractors**.**

Cove Scallop, Port Canaveral, FL
Surface Water Engineer for a 137 acre commercial/industrial redevelopment area within Port Canaveral, Brevard Co, Florida. Surface water management design, analysis, wetland mitigation hydroperiod restoration calculations, and permitting (FDEP and FDOT) of conveyance stormwater system (pipes, inlets), water storage and treatment pond and discharges facilities (outfall structures, water quality weirs, flap gates) that discharge to the Banana River (Outstanding Florida Water) and Harbor**.**

L-2 Pump Station, West Palm Beach, FL
Surface Water Engineer for surface water management design, analysis/modeling and permitting for a new 250cfs (3-55,000gpm pumps) pump station with gravity sluice gate to serve a 500 acre low lying low income residential and commercial/industrial area within the SFWMD's C-51 Basin. Project involved coordination with numerous stakeholders within the Eastern C-51 Basin (Westgate CRA, SFWMD, LWDD, City of WPB, Palm Beach Co, and Palm Beach Int'l Airport) and was funded by FEMA.

MCZ1200, MCZ Centrum Citrus Farm, St. Lucie Co, FL
Surface Water Engineer for surface water management design (i.e., berms, dikes, recharge ditches, haul road, water control (structures, dewatering pumps, etc.), analysis and permitting of the water storage and recharge areas for a 1,200 acre mining operation in St. Lucie Co, Florida. Project involved coordination with environmental consultants, hydrogeologists (minimize groundwater drawdown impacts), and governmental agencies (FDEP, SFWMD and St. Lucie Co).

R & L Enterprises, Martin Co., FL
Surface Water Engineer for a 3600-acre hydroperiod restoration/conservation area located in Martin County. Surface water management design, water control structure design, surface water analysis/modeling, and hydroperiod analysis to meet NRCS standards.

TETRA TECH

Gregory Roof, P.E.
Environmental Engineer

Mr. Roof has approximately 31 years of professional experience including 24 years of experience in the environmental and civil consulting/construction industry. He has also served in the United States Air Force for five years as an officer and two years in manufacturing. His current roles include being a technical lead as a Professional Engineer. Project experience includes all areas of CERCLA and RCRA corrective action processes; UST and AST system design, installation and removal; UST site assessment and remediation (Texas and Florida); engineering design; preparation of plans and specifications (CSI format); horizontal/water resource construction; hazardous waste management compliance; waste characterization; RCRA unit closure; RCRA unit closure certification; facility decommissioning; remedial design; remedial action; mechanical design; industrial compliance (under various regulatory programs); Space Optimization for the USAF using S-file; property transfer assessments; environmental baseline surveys; and asbestos.

Project Role:

Environmental Engineering Lead

Education:

B.S.; Mechanical Engineering; University of Akron, 1983

Post-Graduate Courses; Engineering; Colorado State University; 1986-1987

Registrations/Certifications:

Professional Engineer, Florida, 50842, 1995

40-Hour OSHA Hazardous Waste Health and Safety Training; 06/1997

8-hour OSHA Hazardous Waste Health and Safety Annual Refresher Training; current

ASME B31.3 Industrial Process Piping Code Course, 1992

Office:

Jacksonville, Florida

Years of Experience:

31

Years with Tetra Tech:

13

EXPERIENCE

Program Manager, 2013 – present
Naval Facilities Command Southeast (NAVFAC SE), Compliance Services
Mr. Roof is the program manager leading Tetra Tech's portion of the $7.5 million compliance contract with NAVFAC SE. Tetra Tech is in an 8A joint venture to perform these services. Today 8 task orders totaling more than $330,000 have been awarded and are being executed by the team. As a value added service, Mr. Roof's program team developed a SharePoint site for our team and client to use to track all appropriate information related to the program.

Engineer, 2008 – present
Site Assessment and Interim Source Removal for Golf Course; Orlando, FL
Mr. Roof reviewed a Phase I/II Environmental Site Assessment prepared by others for accuracy and proposed a more accurate investigation to address potential soil and groundwater contamination associated with maintenance equipment cleaning operations. His team completed a confirmatory sampling program that eliminated some false positives and reduced the amount of investigation required. Following a phased approach, Mr. Roof's team investigated soil and groundwater at the site and used the Florida UCL (FL-UCL) program to define an area for excavation. The FL-UCL program supported a reduced treatment effort that resulted in an approximate 25% savings. He prepared and submitted an interim source removal work plan under Chapter 62-780 F.A.C. and is waiting on approval to complete the removal. Mr. Roof expects that the source removal will allow for a more rapid and lower cost groundwater treatment effort.

Project Manager, 1999 – 2006 and 2009 – present
NAVFAC SE, Jacksonville, FL
Mr. Roof is the Project Manager and technical lead for multiple projects being handled under the Installation Restoration Program (IRP) in accordance with the Federal Facilities Agreement. Projects include conducting/preparing preliminary assessments/site investigations, remedial investigation/feasibility studies, corrective measure studies, proposed plans, records of decision (RODs), statements of basis, treatability studies and 5-year reviews. In this role, Mr. Roof schedules and manages subcontractors; mentors junior staff; develops and reviews work plans, RI/FS reports, long term monitoring reports, and engineering inspections required under RODs; and manages all aspects of each project including technical and financial. Mr. Roof has prepared closure certification for one of the NAS Jacksonville RCRA hazardous waste units, and prepared and led a decontamination and closure effort for another unit on Naval Station Mayport. Chemicals of concern included metals, chlorinated-compound and other VOCs, pesticides, herbicides, dioxins and PCBs. Participated as the NAS Jacksonville partnering team representative for company, which includes members of the Navy, and state and federal regulators.

During his 8+ years in this role he managed more than 30 Contract Task Orders (CTO) totaling more than $7 Million. In his current role he has 13 open task orders totaling approximately $5 Million.

Base Team Lead, 2009
U.S. Air Force Space Optimization Data Collection and Design Charrettes; Multiple Bases
Mr. Roof began participating on the Space Optimization data collection teams in March 2009. In six months he performed data collection efforts at 14 bases. He began as a junior team member mostly responsible for collecting space measurements. He advanced to a team and base lead and was one of Tetra Tech's top 5 personnel working in the data collection phase of this program. He presented the in brief to the Civil Engineering department including the base Civil Engineer. He also performed the quality assurance function and participated in planning and team selection for future work

Project Manager, 2007 – 2008
Harris Bayou St Johns River Water Management District Civil Works Contract, FL
Mr. Roof was the project manager for 4 task orders under an annual civil works contract. The total budget for these task orders was approximately $5 Million. Project construction activities included clearing and grubbing, levee repair, relocation of utilities (jack and bore), levee road construction, filling of wetlands, excavation of approximately 2,500 feet of channel, installation of approximately 5,500 feet of cast-in-place 10'x10' double barrel box culvert, construction of wing walls and head walls, stockpiling of soil, backfilling of excavations, and restoration of the work area. The 3 task orders were completed in accordance with the evolving schedule.

Project Manager, 2007 – 2008
Sunnyhill Farms Restoration, St Johns River Water Management District (SJRWMD) Construction, FL
The Sunnyhill Farms area was obtained by the water management district as part of the Ocklawaha River restoration project. One levee (built by others) was in disrepair. Mr. Roof was the project manager for 3 task orders under the annual civil works contract. The total budget for these task orders was approximately $3 Million. Project construction activities included clearing and grubbing, levee repair, construction of a 3,300 foot long levee, installation of a 24-foot long 6'x10' pre-cast box culvert, installation of CMP culvert, excavation and de-mucking of flow channels, construction of wing walls and head walls, installation of rip rap, backfilling of excavations, and restoration of the work area. The 3 task orders were completed in accordance with a very aggressive schedule as required by the client.

Delivery Order Manager, 2004 – 2006
NASA RCRA Corrective Action Projects; Cape Canaveral, FL
Mr. Roof was the Delivery Order (DO) Manager and technical lead for multiple projects being handled under NASA's RCRA corrective action program. His team performed a SWMU assessment and prepared the work plan for subsurface investigation at areas identified in the SWMU Assessment Report (SAR). The SAR was completed and approved without edit. The CS work plan was approved without change and the CS effort was completed. The CS report has been completed and approved as submitted. Mr. Roof saved NASA approximately $50,000 (cost of a potential interim measure) by using TRPH speciation to eliminate the need for an interim measure excavation. For the second site, the CS effort was completed and the report was accepted by the regulator without edit. Additionally, Mr. Roof prepared the statement of basis (SOB) and Land Use Control Implementation Plan (LUCIP) for dissolved phase groundwater contamination. They implemented the MNA program and are performing the second year of monitoring. All four reports were approved by the regulator without comment. This site also contains multiple LNAPL plumes that continue to exist after an excavation to remove the source was performed by others. Mr. Roof led the initial stages of the investigation to better define the source of the LNAPL.

Project Manager and/or Technical Lead, 1999 – 2006
NAVFAC SE Various Petroleum Site Projects at Various Naval Stations, FL
Mr. Roof was the Project Manager and/or technical lead for multiple projects being handled under the state of Florida Petroleum Program. Projects included conducting site assessments (SA), treatability studies and long term monitoring programs, and preparing remedial action plans. In this role, he developed and reviewed work plans, SA reports, long term monitoring reports, and managed all aspects of each project including technical and financial.

TETRA TECH

Gerry Walker, P.G.
Geologist

Mr. Walker has 25 years of experience conducting Preliminary Contamination Assessments, Remedial Investigations and Feasibility Studies, Screening Site Investigations and overseeing groundwater contamination investigations. Mr. Walker is currently the Contract Manager for a five year contract with the Florida Department of Environmental Protection to complete Targeted Brownfield Assessments and CERCLA Site Assessments at sites throughout the State of Florida. Mr. Walker is the Project Manager for implementation of RCRA Facility Investigation Addendum and Corrective Measures Study at Naval support Activity Panama City, in Panama City, Florida, Project Manager for CERCLA and UST investigations at Naval Air Station Pensacola and Outlying Landing Fields in Pensacola, Florida. Formerly Mr. Walker was Project Manager and Senior Technical Lead for CERCLA and RCRA investigation and remediation at Naval Air Station Jacksonville, in Jacksonville Florida.

Project Role:

Geologist

Education:

BS, Geology, 1984,

Ohio University

Registrations/Certifications:

Professional Geologist, FL, Number PG1180

Professional Geologist, MS, Number PG065

40-Hour OSHA Hazardous Waste Health and Safety Training

Office:

Tallahassee, Florida

Years of Experience:

34

Years with Tetra Tech:

20

EXPERIENCE

Contract/Program Manager; Florida Department of Environmental Protection Targeted Brownfield Assessments and CERCLA Site Assessments, Multiple Sites within Florida, April 2005 to Present.
Mr. Walker was responsible for client relations, contract management, and technical oversight for the eight year contract to investigate and cleanup Targeted Brownfield Assessment sites and investigates State lead CERCLA sites. Under this contract Mr. Walker has overseen assessments or investigations at 21 Sites located throughout the State of Florida. Work has included Phase I and Phase II assessments, Environmental Site Assessments and Supplemental Site Assessments, UST removals, and Soil excavation and disposal remedial work.

In support of the Targeted Brownfield Assessment sites, Mr. Walker oversees completion of Phase I and Phase II Environmental Site Assessments and adheres to USEPAs All Appropriate Inquires. Mr. Walker has coordinated with subcontractors, site owners, and Florida Department of Environmental Protection Agency personnel and oversaw site loading, transportation, and disposal of contaminated soil from a TBA site in Tallahassee, Florida and a City of Miami site in Miami, Florida. For the project Mr. Walker managed completion of a removal action work plan, onsite loading and transport oversight, and writing and submittal of the Removal Action Completion Report.

Project Manager; Remedial Investigation, Feasability Study, Proposed Plan, Record of Decisions and Remedial Design for Installation Restoration Site 41 the Combined Wetlands at NAS Pensacola; NAVFAC Southeast; NAS Pensacola, Pensacola Florida; April 2006 to Present.
Mr. Walker is responsible for completing a Response to Comments and Final Remedial Investigation Report, Feasibility Study, Proposed Plana and ROD for Site 41 the Combined Wetlands at NAS Pensacola He oversaw completion of draft and final planning documents including separate site-specific Work Plans and Health and Safety Plans. Work at the site included additional sediment sampling, negotiation with regulatory agencies and coordination of public comment periods.

Project Manager; Record of Decision and Remedial Designs at Operable Units 11 and 13 NAS Pensacola; NAVFAC Southeast; NAS Pensacola, Pensacola Florida; April 2006 to Present.
Mr. Walker is responsible for finalizing and submitting Final Record of Decisions and draft and final Remedial Designs for Operable Units 11 and 13 at NAS Pensacola, Pensacola, Florida. He oversaw the completion of remedial designs implementing the selected remedies specified in the ROD including Land Use Controls and groundwater monitoring.

Project Manager; Remedial Investigation for the Site 4 Saufley Field; NAVFAC Southeast; Pensacola, Florida; May 2006 to Present.
Mr. Walker was responsible for implementing a Remedial Investigation at the Installation Restoration Site 4, Former Hangar Area, Saufley Field. Previously environmental sampling had not been completed at the site. Mr. Walker oversaw completion of draft and final planning documents including a site-specific work plan and Health and Safety Plan. Work at the site included completion of a file search, geophysical investigation, DPT soil borings, screening for excessively contaminated soils, installation of shallow, intermediate and deep monitoring wells using hollow stem augers, and rotosonic techniques, and the collection and analysis of soil and groundwater samples. Mr. Walker supervised the collection, characterization and disposal of site generated Investigation derived wastes.

Initially Mr. Walker determined the investigation scope, established the proposed schedule and determined the cost to complete. Contaminants of concern at the site include free-product, Volatile Organic Compounds, Semi volatile Organic Compounds, and metals.

Following the investigation stage of the project, Mr. Walker reviewed environmental data, oversaw the organization of the environmental data base and supervised completion of the Site Assessment Report. The Site Assessment Report included a summary of the data collected, tables and figures to document and explains the data, and conclusions and recommendations.

Project Manager; Contamination Assessment Reports and Remedial Investigations at Site 44, 45, and 46 NAS Pensacola; SOUTHNAVFACENGCOM; NAS Pensacola, Pensacola Florida; January 2005 to Present.
Mr. Walker is responsible for completing Contamination Assessment Report Addendums and Remedial Investigations for three Installation Restoration sites contaminated with volatile organic compounds and/or metals. He oversaw completion of draft and final planning documents including separate site-specific Work Plans and Health and Safety Plans. Work at the site included completion of soil borings, installation of groundwater monitoring wells, aquifer testing, and the collection and analysis of soil and groundwater samples.

Initially Mr. Walker determined the investigation scope, established the proposed schedule and determined the cost to complete. Contaminants of concern at the site included Volatile Organic Compounds, Semi volatile Organic Compounds, and metals. Following completion of the fieldwork, Contamination Assessment Reports were written to incorporate additional data and changes in the regulatory requirements. Mr. Walker oversaw the summarizing of environmental sample analytical data, generation of summary figures and tables and development of conclusions and recommendations.

Project Manager; NAS Pensacola Long-term Monitoring for Four UST Sites; SOUTHNAVFACENGCOM; NAS Pensacola, Pensacola Florida; June 1999 to December 2005.
Mr. Walker was responsible for implementing a long–term monitoring plan at four Underground Storage Tank sites located at Outlying Landing Field Bronson a subcommand of NAS Pensacola. Mr. Walker oversaw completion of draft and final planning documents including a site-specific Health and Safety Plan and Quality Assurance Plan. Work at the site included completion of soil borings, installation of groundwater monitoring wells, and the collection and analysis of soil and groundwater samples.

Initially Mr. Walker determined the investigation scope, established the proposed schedule and determined the cost to complete. Contaminants of concern at the site included Volatile Organic Compounds, Semivolatile Organic Compounds, and metals.

Under Mr. Walker supervision three of the four sites have been closed as No further Action based on the quarterly sampling results.

At the fourth site Mr. Walker is supervised completion of a Treatability Study using ISOC an oxygen releasing compound, to stimulate the natural bioactivity. For the Treatability Study, Mr. Walker oversaw completion of the Treatability Study work plan, the baseline sampling event, installation of the injection wells and setup of the ISOC equipment, and quarterly monitoring of groundwater to test the success of the process. Mr. Walker supervised data evaluation, report preparations, and any modifications to the study.

Michael R. Barnett, PE, D.CE

Senior Coastal Engineer

Mr. Barnett is a registered Professional Engineer with over 30 years of experience in coastal engineering. Mr. Barnett has led technical teams in the feasibility, planning, design, engineering, permitting, and construction document preparation for beach restoration and nourishment projects in Florida, for critically-eroding beaches fronting the Atlantic Ocean and Gulf of Mexico. Mr. Barnett has additionally served in state government, as the former Chief of the Florida Department of Environmental Protections' (FDEPs) Bureau of Beaches and Coastal Systems. He is currently serving on the Project Team working on the artificial reef construction element associated with the Miami Harbor Deepening Project, Phase III.

EXPERIENCE

Senior Coastal Engineer, July 2013-Present
Miami Harbor Deepening Project, Phase III, Florida. Great Lakes Dredge and Dock Company (GLDD)
Mr. Barnett served on a project team as a senior coastal engineer working with GLDD as the Prime Contractor (End Client is the USACE, Jacksonville District) to conduct environmental management and quality control/quality assurance reviews and reporting to the USACE, FDEP, and federal and state resource agencies of this approximately 2-year duration project. The base contract authorizes the dredging of approximately 5 million cubic yards of sediment and unconsolidated material from the federal channel to depths of -50 feet (ft) mean low, low water (MLLW), with the outer Cut to -52 ft MLLW, with one foot allowable overdepth in all stations within the federal channel. Responsible for project management of artificial reef construction of 9.28 acres of low-relief and high-relief reef comprised of quarry-sourced limestone from Miami-Dade County, as mitigation to offset impacts of channel deepening on coral and hardbottom communities. Reefs are being constructed 2.4 miles offshore in water depths of 42 – 45 ft MLLW. Additionally responsible for task management of placement of approximately 60,000 cubic yards of 'select' fill (clean sand with a low percentage content of fine-grained sediments) to cap a base fill layer of dredge spoil material in a large dredge hole in Biscayne Bay (just north of the Julia Tuttle Causeway) located north of the Port of Miami.

Senior Coastal Engineer, June 2013-Present
Oyster Reef Creation Design and Permitting, Hillsborough Bay, Florida
Mr. Barnett served on the project team as a senior coastal engineer to undertake design and permitting aspects of Phase I of this two-phase project. Performed review and quality control checks of wind, wave, and tidal forcing functions and unit sizing and stability calculations utilized in the design of a stable plan and cross-section configuration of a created oyster reef substrate. Provided text and review of descriptive and graphic elements of permit application packages assembled by the Team for submittal to the USACE, Jacksonville District, the Southwest Florida Water Management District and the Tampa Port Authority. Conducted coordination with a local marine contractor selected to undertake the construction aspect of the project (Phase II) in order to develop a preliminary estimate of probable cost.

Project Role:
Senior Coastal Engineer

Education:
BS, Ocean Engineering, 1981, Florida Institute of Technology

ME, Coastal & Oceanographic Engineering, 1987, University of Florida

Registrations/Certifications:
Professional Engineer, Alabama, issued March 2012; License Number 32565

Professional Engineer, Florida, issued August 1991; License Number 44625

Professional Engineer, Mississippi, issued February 2012; License Number 20586

Professional Engineer, Texas, issued July 2013; License Number 114806

National Council of Examiners for Engineering and Surveying, Council Record issued January 2012; Record Number 47814

Diplomate, Coastal Engineering, Academy of Coastal, Port & Navigation Engineers, October 2011

American Shore & Beach Preservation Association

Florida Shore & Beach Preservation Association

Society of American Military Engineers, Mobile

Office:
Mobile, Alabama

Years of Experience:
31

Years with Tetra Tech:
2.5

Senior Coastal Engineer, June-September 2013
Limited Environmental Impact Assessment (LEIA), Indigo Landing Development, Frenchman's Cay British Virgin Islands. Private Development Client
Mr. Barnett assisted with the preparation of a LEIA for the addition of a private concrete pile-supported private dock and upland parcel improvements for a single-family dwelling on the west end of the island of Tortola, BVI. The boundaries and a recommended grid pattern for conduct of detailed bathymetric and marine surveys on the receiving waters as well as a sufficient topographic coverage to capture drainage conveyances and patterns on the property were provided to subcontractors working on the Project Team. After synthesizing the data and information, the LEIA report was prepared in accordance with the format stipulated by the Town and Country Planning Department of the BVI government, and transmitted to the client.

Senior Coastal Engineer, August-December 2012
Florida Department of Environmental Protection (FDEP), Tallahassee, Florida
Mr. Barnett served on a consultant team hired by the state to help facilitate and conduct research for the Florida Commission on Oil Spill Response Coordination, which was created by the 2011 Florida Legislature. The Tetra Tech Team was responsible for organizing, staffing, and conducting a series of meetings of the 17-member appointed Commission in the Florida Panhandle, and for the preparation and transmittal of 6 reports that focus on evaluation of the existing laws and regulations pertaining to oil spill response, funding and claims mechanisms, and the need for interstate coordination agreements for improved response to future oil spill incidents – and for guiding the Commission toward decision-making on whether improvements or changes are needed. The Team prepared a final report in December 2012 that the Commission subsequently approved and transmitted to the Governor, Senate President, and the Speaker of the House by the legislatively-mandated January 1, 2013 deadline.

Project Manager, April–July 2012
South Gulf Cove Lock Feasibility Study, Port Charlotte, Florida, Southwest Engineering & Design
Mr. Barnett served as project manager for services as a subconsultant on a team selected by Charlotte County, Florida to evaluate the feasibility of installing a second boat lock to connect an interior residential canal network to Charlotte Harbor. Services included conceptual design schematics, estimates of dredged material volumes and disposal options needed to accomplish the connection between water bodies, an interagency meeting to discuss permitting and proprietary issues, and development of significant elements of the feasibility report, which was transmitted to the County in early July 2012. Owing to significant environmental impact and land ownership issues, the study concluded that the project was not feasible.

Bureau Chief, December 2003-August 2011
Florida Department of Environmental Protection (FDEP), Bureau of Beaches and Coastal Systems
Mr. Barnett served as Bureau Chief during this nearly 8-year span, where administrative responsibilities included oversight of the Bureau's 74 full-time staff and its approximately $5million annual operating budget, and administration of Florida's Beach Management Program, which leverages federal, state and local dollars to preserve, restore and protect Florida's sandy beach shorelines. Regulatory reviews and authorizations were conducted for numerous beach restoration and nourishment projects throughout the state of Florida, for projects fronting the Atlantic Ocean, Straits of Florida, and Gulf of Mexico. Regulatory authorizations for several federal navigation channel maintenance dredging and sediment beneficial use/disposal operations were also provided to the U.S. Army Corps of Engineers (USACE) Jacksonville and Mobile Districts. These latter activities were administered through the Bureau's Joint Coastal Permitting (JCP) Section.

TETRA TECH

Michael O. Jaynes, P.E.

Remediation Engineer

Mr. Jaynes has over 22 years of experience in environmental engineering including contamination assessment, remedial investigations, feasibility studies, remedial system design and implementation, and project management. His experience includes site assessment, well drilling and direct-push technology oversight, groundwater, surface water, sediment, and soil sampling, landfill studies, aquifer characterization, and general construction oversight. His expertise is in remedial system design, installation and construction oversight, system monitoring, operation and maintenance, CERCLA and RCRA decision document preparation, and project management. Other experience includes tank inspections, SPCC plans, data acquisition, management, and interpretation, and proposal and report writing. Mr. Jaynes' experience also includes work at industrial sites, RCRA landfills, U.S. Naval Facilities, underground storage tank (UST)/petroleum sites, commercial drycleaner/chlorinated solvent sites (in Florida), U.S. Coast Guard Facilities, Targeted Brownfields sites (in Florida) and National Priority List (NPL) Superfund sites.

Project Role:

Remediation Engineer

Education:

BS, Chemical Engineering/Petroleum Refining, 1991,

Colorado School of Mines

Registrations/Certifications:

Professional Engineer, FL, Number 55441

Professional Engineer, MS, Number 17816

40-Hour OSHA Hazardous Waste Health and Safety Training

Assessment, Control, and Remediation of LNAPL Sites

The Princeton Remediation Course, Groundwater Modeling and Remediation, December

Florida Building Code Course

Office:

Tallahassee, Florida

Years of Experience:

23

Years with Tetra Tech:

10

EXPERIENCE

Project Engineer, 2013 – Present
Florida Department of Environmental Protection (FDEP), Hazardous Waste Site Cleanup and Drycleaning Solvent Cleanup Program, Contract HW560, Various locations throughout the State of Florida, Project Engineer.
Engineer of Record for the remedial actions at 6 drycleaning sites in Florida. The work includes the design of remedial systems, in-situ bio-augmentation and bio-stimulation, operation and maintenance (O&M), operational enhancement of soil vapor extraction systems, the preparation of Remedial Alternative Evaluations, Remedial Action Plans (RAPs), RAP Modifications, Construction Completion Reports, and Annual O&M Reports.

Feasibility Studies, Proposed Plans, Record of Decisions, and Remedial Designs, Naval Air Station (NAS) Whiting Field, Milton, Florida, January 2005 - Present.
Mr. Jaynes is currently the technical lead for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) investigations at NAS Whiting Field, an NPL facility. His responsibilities include remedial alternative analysis; preparation and review of feasibility study/proposed plan/record of decision (FS/PP/ROD) documents and remedial design (RD) documents for several sites across the facility requiring various degrees of remedial action including the basewide groundwater investigation (Site 40) and soil excavation at Site 41, the Former Pesticide Storage Building. Fifteen (15) RODs were completed and signed within the last six years for Sites 2, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 29, 35, and 38. The selected remedy for the majority of these sites involve Land Use Controls (LUCs) to restrict access to and future land use of sites with surface and/or subsurface soil contamination.

Feasibility Studies and Remedial Designs, NAS Pensacola, Pensacola, Florida, November 2008 - Present.
Mr. Jaynes is currently the engineer of record/technical lead for five CERCLA sites at NAS Pensacola. His responsibilities include preparation and review of FS and RD documents addressing various sites including Sites 38, 43, 44, 45, and 46.

Feasibility Studies and Remedial Designs, Naval Construction Battalion Center (NCBC) Gulfport, Mississippi, November 2006 - Present.
Mr. Jaynes is currently the Engineer of Record/technical lead for five CERCLA sites at NCBC Gulfport. His responsibilities include preparation and review of FS and RD documents to address landfills at Sites 1, 2, 3, 4, 5, 7, and 10.

Florida Department of Environmental Protection (FDEP), CERCLIS Site Assessments and Targeted Brownfields Projects, March 2006 – Present.
Mr. Jaynes has been is involved with the Targeted Brownfields projects at sites throughout Florida. His responsibilities as project engineer included site rehabilitation, remedial alternative analysis, remedial action review, implementation (excavation and construction) oversight. Other responsibilities include development of cost estimates and proposals and report preparation.

Remedial Action Plan, Alpha Delta Piers, Light Non-Aqueous Phase Liquid (LNAPL) Monitoring and Removal, NAVSTA, Mayport, Florida, May 1996 - January 1998.
Mr. Jaynes was responsible for execution of the remedial action plan (RAP) at the Alpha Delta Piers (a UST site) at NAVSTA Mayport. His responsibilities included field operation and project management (planning and scheduling), LNAPL monitoring, groundwater sampling, and other field related tasks. Other responsibilities included data acquisition and analysis, and preparation of quarterly monitoring reports.

Navy Environmental Leadership Program (NELP), Technology Initiative Support, NAVSTA, Mayport, Florida, December 1995 – July 1998.
Mr. Jaynes represented ABB-ES/HLA as third party QA/QC oversight during implementation of new and innovative technologies (including in situ bioremediation, thermal desorption, and direct-push technologies) by other Navy designated contractors at various RFI SWMUs at NAVSTA Mayport. His responsibilities included review of contractor documents, oversight and documentation of field activities, observation of system construction and operation, coordination with base personnel and contractors, and problem resolution. Other responsibilities include confirmatory soil and groundwater sampling, data acquisition and analysis, and preparation of technology evaluation reports.

Underground Storage Tank (UST) Sites, NAS Whiting Field and NAS Pensacola, Florida, June 2006 – Present.
Mr. Jaynes is currently the technical lead for several UST sites at NAS Whiting Field and NAS Pensacola in Florida. His responsibilities include development and/or PE review of Remedial Action Plans (RAP), technical support, and partnering oversight of all engineering design aspects for several sites (Site 4, Site 7, Building 2894, Building 1438/1439, and the AVGAS E Pipeline) at NAS Whiting Field and two sites [UST Site 18 and Site 22 (the Berthing Pier)] at NAS Pensacola. These sites all involve actions that address petroleum (BTEX, PAH, TRPH, and metals including arsenic and lead) contamination in soil and groundwater.

Waste Management, Inc. (WMI), Spill Prevention, Control, and Countermeasure (SPCC) Plan Updates, May 2008 – November 2008.
Mr. Jaynes was involved in reviewing and updating SPCC plans for several WMI facilities in Florida. His responsibilities included conducting site inspection visits at the WMI facilities, site personnel interviews, AST tank, dispenser, and leak detection inspections and inventories, facility documentation review, and PE certification of the final plans.

United States Coast Guard (USCG) SSPCC Plans, September 2000 – October 2004.
Mr. Jaynes was involved in updating and preparing SPCC plans for several USCG facilities in the southeast region. His responsibilities included conducting site inspection visits at the facilities, personnel interviews, tank inspections and inventories, photo documentation, and facility background research. Other responsibilities included preparing site visit summary reports and developing the final updated SPCC plans.

FDEP, Petroleum Preapproval Program, March 1999 – January 2005.
Mr. Jaynes was involved with the FDEP's Preapproval Program at several commercial petroleum sites throughout Florida. His responsibilities included all aspects of site rehabilitation including project management, contamination assessment, remedial alternative analysis, remedial action plan (RAP) development including system design, construction, and implementation, system monitoring, operation and maintenance, and construction oversight for various UST sites with BTEX, PAH, TRPH, and lead contamination. Other responsibilities included development of cost estimates and proposals and report preparation.

TETRA TECH

Kathleen Homer

RCRA Permitting Lead

Ms. Kathleen Homer has 35 years of experience in environmental management and consulting, including operational, program, and project management; client services; quality assurance and quality control. Prior to joining Tetra Tech, she spent eight years at U.S. Environmental Protection Agency (EPA) Region 5 in Chicago, Illinois. She has extensive experience with the implementation of environmental regulatory programs. She has extensive experience with the implementation of RCRA and CERCLA. She has managed and assisted on various contracts and projects that involved RCRA and CERCLA policy development, public participation, conducted RCRA compliance evaluations, permit reviews and permit preparation, enforcement and litigation support, and development of guidance documents. Ms. Homer has also been responsible for training federal, state, local, and industry officials on hazardous waste regulations and procedures.

Project Role:

RCRA Permitting

Education:

BS. Geology, University of South Dakota, Vermillion, SD 1978

Postgraduate studies, Geology, University of Illinois, Chicago, IL

Registrations/Certifications:

ANSI-RAB certified ISO 14000 Environmental Management Systems course for Lead Auditors, 1997

EARA approved Advanced EMS Auditor Course, 1997

Excel "Implementing an ISO 14001 Environmental Management System, 1998

Office:

Kansas City, MO

Years of Experience:

35

Years with Tetra Tech:

27

EXPERIENCE

PERMITTING DEVELOPMENT AND REVIEW

Ms. Homer has worked with her staff to prepare draft RCRA permits for EPA Region 7 issuance to regulated facilities. She has conducted Part B permit application reviews of numerous RCRA facilities for state and federal regulatory agencies, and has prepared numerous Part B permit applications for other clients. She has been responsible for Part B permit application reviews for Region 7 EPA at container and tank storage facilities, post-closure facilities, and boiler and industrial furnace facilities. She also served as technical lead for a Region 4 permit review work assignment, reviewing container, tank, and post-closure permit applications in Region 4. She revised the RCRA Part B permit application review checklist used by EPA, and prepared a federal post-closure permit application review checklist. These checklists have been used by EPA and regulated facilities across the nation.

Ms. Homer has recently completed a RCRA permit renewal application and major permit modification for an oil and gas facility, working to ensure that the application and modification are consistent with both regulatory requirements and current facility operations. As part of this process, she effectively eliminated the need for a post-closure permit, limiting the permit renewal to a corrective action only permit.

She has recently completed preparation and submittal of a Part B post-closure renewal application for a Fortune 500 private client in Georgia. Prior to her involvement with the company, they also operated as a RCRA storage facility. She effectively eliminated the need for the storage facility permit, and worked with the State of Georgia to streamline the post-closure permit application. As part of the permit process, she also prepared extensive comments on the draft permit during the public comment period, and these comments were accepted in large by the regulatory agency, for incorporation into the final permit.

She is currently supporting a nation-wide waste recycling and transportation company with preparation and submittal of RCRA permit applications in multiple locations across the nation.

For the Navy, Ms. Homer prepared a post-closure permit application for Naval Air Station (NAS) Pensacola, and served as technical reviewer for a post-closure permit application for NAS Jacksonville. NAS Pensacola's permit application was accepted by the state of Florida as complete, upon initial application.

Ms. Homer developed a 3-day RCRA permit writer's training course for EPA. She developed the course outline and manual, and was one of two instructors who team teach the course. The course covered all aspects

of the RCRA permit process, including adequacy and completeness reviews, permit preparation, public participation processes, public meetings, hearings, and records. It was delivered to state and federal RCRA staff in both Regions 7 and 9.

REMEDIATION/CORRECTIVE ACTION

Ms. Homer recently served as one of Tetra Tech's technical leads for a nation-wide EPA corrective action training course. EPA Headquarters sole-sourced this project to Tetra Tech. The three and ½ day course focused on innovative solutions for progressing to completion of corrective action at RCRA facilities, and it will be presented in all ten EPA regions She also served as the Region 7 Tetra Tech representative for a two-day corrective action course developed specifically for EPA Region 7 states. Her responsibilities included ensuring that the course was responsive to the training needs of Region 7 EPA, and participating states.
Ms. Homer served as technical lead for preparation of environmental indicator checklists for Region 7's high priority corrective action facilities. She has also served as the primary technical reviewer for EI checklists prepared for Regions 1 and 2. She has also prepared EI checklists for private clients, and EPA and state agencies have used these checklists, in turn, to determine that human exposures are under control, and groundwater contamination has been stabilized, at the private clients' facility.

Ms. Homer served as the project manager for a project with NDEQ involving development of policy and guidance for NDEQ's voluntary cleanup program (VCP). As part of this project, she worked with NDEQ to ensure that the VCP guidance focuses on a streamlined approach to remediation, one that will result in rapid reuse of currently unusable properties. In addition to policy and guidance development for participants, she developed standard operating procedures for NDEQ staff in conducting oversight of VCP participant activities, conducting stakeholder meetings, and preparing and conducting training for participants.

Ms. Homer is part of the multidisciplinary team that has conducted corrective action oversight for nearly all of Region 7's high priority corrective action facilities. Corrective action oversight has included review and comment on facility investigation work plans, interim measure work plans, corrective measures work plans, corrective measures studies, remedial investigation reports, groundwater monitoring plans, and sampling and analysis plans. She has also performed technical reviews of numerous corrective action documents prepared by Tetra Tech for Regions 4, 5 and 7.

Ms. Homer has been responsible for technical and quality assurance reviews for decision documents, particularly Statement of Basis documents for Region 7. She also recently served as the lead for preparation of the administrative records associated with corrective action decisions, documenting over 10 years of activity at several Region 7 high priority corrective action facilities.
Ms. Homer has performed numerous RCRA Facility Assessments for EPA Regions 5 and 7. For these RFAs, she described facilities and their waste management practices based on information collected from state and federal files, which identified solid waste management units. She determined their potential for releasing hazardous constituents to the environment, potential release pathways from facilities, and target populations for these releases. Based on her review of existing data, she recommended sampling activities or corrective action.

TETRA TECH

Georgia A. Vince
Regulatory Lead

Ms. Vince has over 16 years of experience with regulatory and permitting programs for state, federal and local levels of government, included Sovereign Submerged Lands, Joint Coastal Permitting, Environmental Resource Program, Coastal Zone Management reviews and Section 404 permitting for large and small projects including linear pipelines, ports and offshore construction projects. Experience also includes Section 106 Consultation, wetland delineations, wetland mitigation, wetland restoration, environmental assessments, National Environmental Protection Act (NEPA) Analysis, threatened and endangered species biological assessments. Previously, Ms. Vince was responsible for permitting and compliance activities related to Comprehensive Everglades Restoration Project (CERP) project through coordination with planning, engineering, construction and operation. Ms. Vince has extensive experience in public speaking and coordinating with stakeholders on sensitive environmental issues.

EXPERIENCE

Task Manager, Resource Report 3 – Fish Wildlife and Vegetation, Aguirre Offshore Gasport and Pipeline Project, Puerto Rico (2013)
Responsible for preparing Resource Report 3 for the Federal Energy Regulation Commission (FERC) application. Tetra Tech was hired to assist Excelerate Energy with design and permitting of an Offshore Liquid Natural Gasport Terminal (Gasport) and associated gas pipeline for connection to an existing upland power plant in Aguirre Puerto Rico. The regulatory approvals needed include state, local and federal agencies as well as FERC. The project crosses the Jobos Bay National Estuary Research Reserve and has potential impact on marine and estuarine habitats. Also responsible for coordination and review of Biological Assessment for protected species and Essential Fish Habitat Analysis.

Project Manager, Kitching Creek Central Flowway Restoration Project, Martin County (2013)
Responsible for coordination with Martin County engineering staff, design engineers and hydrologic modeling results to ensure project purpose and construction schedule are met for this large scale restoration project. Coordinate with County biologists regarding wetland restoration efforts. Obtained state and federal environmental permit documents.

Task Manager, Fort Pierce Marina Storm Protection Islands, Fort Pierce, FL (2012)
Task manager responsible for permitting components of the large scale habitat creation project within the Indian River Lagoon, including maintenance dredging for navigation channel and coordinating with regulatory agencies during construction and permit compliance oversight for the duration of the construction scheduled completed January 2014. Significant post construction compliance conditions exist in both the state and federal issued permits due to the sensitive environment, submerged aquatic vegetation, mitigation components and protected species.

Project Manager, South Florida Water Management District (SFWMD), Everglades STA Technical Support (On-going)
Project Manager responsible for managing and implementing engineering and other technical support for the operation and management of the Everglades

Project Role:
Environmental Permitting Lead

Education:
BS, Biological Oceanography, 1993,

Florida Institute of Technology

Registrations/Certifications:
Qualified Stormwater Management Inspector # 25763

Wetland Delineation and Hydric Soil Identification Training, 2008

Member of Florida Association of Environmental Professionals

Member of American Water Resources Association

Office:
Stuart, Florida

Years of Experience:
16

Years with Tetra Tech:
3

Stormwater Treatment Areas (STAs). Tasks included STA operational and management support including short and long-term operation of the STAs and supporting activities related to STA performance, GIS analysis, technical briefings and progress reports.

Task Manager, Manatee Pocket Dredging Project, Martin County, FL (2012)
Manatee Pocket is a large scale navigation dredging project. Responsible for permit compliance tracking, permit modifications including submittals, providing requested additional information, formulating seagrass mitigation plans, oversight of seagrass mitigation efforts and mitigation monitoring. Coordinate with regulatory agencies including U.S. Army Corps of Engineers (ACOE), National Marine Fisheries Service (NMFS), U.S. Coast Guard, Florida Fish and Wildlife Conservation Commission (FFWCC), Florida and Department of Environmental Protection (FDEP) and stakeholders.

Project Manager, Wellington Medical Arts District, Environmental Analysis, Wellington, FL (2011)
Responsible for desktop analysis and field visits for wetland delineation, mitigation analysis, and development constraints for 65 acres in Wellington Florida. Analysis included mitigation bank opportunity evaluation and mitigation cost estimate.

Task Manager, SFWMD Mitigation Opportunities Analysis Report, FL (2011)
This report was one deliverable of several tasks under a mitigation statement of work for the Permitting and Compliance Section of the SFWMD. The report included an inventory of SFWMD owned lands and evaluation of potential wetland enhancement projects that could be utilized by the SFWMD wetland mitigation to offset impacts related to other construction and capital improvement projects.

Section Leader Permitting and Compliance, South Florida Water Management District (SFWMD), West Palm Beach, Florida – November 2010
Responsible for CERP project permitting and compliance including obtaining local, state and federal permits for construction and operation of numerous large scale restoration projects, as well as oversight of compliance of previously permitted restoration projects. Coordinate with state and federal regulatory agencies on NEPA process, prepared and reviewed Environmental Assessments (EAs) and Environmental Impact Statements (EIS's), threatened and endangered species review, biological assessments and other regulatory documentation for all SFWMD construction projects. Renegotiating and updating the CERP Mitigation Policy and Ledger with the ACOE and Environmental Protection Agency (EPA) for efficiency and to comply with federal regulations. Represent SFWMD at monthly interagency regulatory and policy meetings. Manage contracts for consultants that provide support for cultural resource investigations related to CERP including implementation and coordination of the Human Remains Policy. Coordinate with Project Managers through planning and engineering process to ensure environmental aspects are considered. Lead efforts to ensure modifications to the Central &South Florida Flood Protection System receive appropriate federal review and approval under 33 USC 408 (Section 408) in accordance with federal policies.

Environmental Resources Program Administrator, Florida Department of Environmental Protection (FDEP), West Palm Beach, Florida - January 2008
Oversee the permitting, compliance and enforcement sections of the Submerged Lands and Environmental Resources Program (ERP) for the FDEP Southeast District including St Lucie, Okeechobee, Martin, Palm Beach, Broward and Miami-Dade Counties. Under Chapter 253, 403 and 373 of the Florida Statutes, the ERP Program regulates the dredging and filling of surface water and wetlands which includes activities out three miles into the Atlantic Ocean. Projects reviewed included linear projects, pipelines, directional drilling, port expansion and deepening projects and utilities as well as Liquid Natural Gas (LNG) pipelines, and subaqueous fiber optic cable installation. Coordinate with many federal, state and local agencies for pre-permit assessments. and compliance inspections. Duties include complaint response, field investigations, construction site inspections for permitted and unpermitted activities and all required enforcement actions for ERP. Formulate case strategy, appropriateness of penalties, assessments and corrective actions for responsible violators with Department staff. Draft all enforcement documents including Warning Letters, Notices of Violations and Consent Orders to parties responsible for violations of Florida Statutes.

Tami Froelich, MPH, CIH, CSP

Environmental Health & Safety Manager

Ms. Froelich is a Certified Industrial Hygienist (CIH) and Certified Safety Professional (CSP) with over 25 years experience. She also holds a Master's Degree in Public Health (MPH), Occupational Health & Safety Management. Her extensive industrial hygiene and safety experience includes overseas safety lead for over 22 countries, past president of the Pacific Northwest Section of the American Industrial Hygiene Association (PNS-AIHA), training supervisor, lead industrial hygienist for an ammonia manufacturing plant and air monitoring/sampling equipment technical representative. Her experience includes supporting sample analysis in an AIHA accredited laboratory and being the sole Pacific Northwest technical representative for a leading air monitoring/sampling equipment manufacturer. Since joining Tetra Tech in 1997, she has produced training courses, worked for clients at the Hanford site doing safety procedure writing and updating, and conducted IAQ investigations and industrial hygiene monitoring at a local hospital. She has supported the Idaho Spent Fuel project as the training coordinator and with design criteria for non-radiological air monitoring equipment. As the Design, Integration, Construction, Communication and Engineering for the Second Line of Defense Program (DICCE) Project's EHS Manager, she has been responsible for all aspects of safety, health, and security for overseas travelers working worldwide, including conducting overseas Project Environmental and Safety Manager audits. She currently supports all of Tetra Tech CES as the safety, health and quality lead for the entire organization.

Project Role:

Industrial Hygene

Education:

Masters of Public Health (MPH), Occupational Health & Safety Management, Tulane University, 2008.

BA, Natural Science/Mathematics, Thomas Edison State College, 1996

Registrations/ Certifications:

Certified Industrial Hygienist (CIH), No. 9380, 2007

Previously, Certified Associate Industrial Hygienist (CAIH), No. 2, 2001

Certified Safety Professional (CSP), No. 23466, 2012

Office:

Richland, Washington

Years of Experience:

26

Years with Tetra Tech:

16

EXPERIENCE

Company EHS & Quality Lead (2011–Present)
Responsible for all aspects of health and safety throughout the Tetra Tech CES Division, including OSHA Recordkeeping, procedure writing, employee EHS training, medical case management, incident investigation, health & safety plan writing and review, regulatory compliance, resource management, and technical oversight. As the lead for all Tetra Tech CES employees, Ms. Froelich manages the implementation of the company's overall safety program that fosters employee involvement, continuous improvement and the application of lessons learned.

Company EHS Training Supervisor (2005–2011)
Responsible for the creation and production of the Tetra Tech EC Division's annual 8 Hour Refresher course. Was the lead in the selection and implementation of TtEC's training database and its companion employee interface module. Successfully migrated the company's historical data from the old system to the new. Wrote user instruction manuals for both supervisors and employees on the use of the system. Created the EHS Orientation Computer Based Training module for all new employees. Manages recordkeeping for all OSHA, DOT and EPA required employee training as well as Hazwoper and overseas travel physicals. Supervises two administrative employees who support ESQ training and other Safety Management System programs.

Project Environmental & Safety Manager (PESM), U.S. Department of Energy, National Nuclear Security Administration; Design, Integration, Construction, Communication and Engineering for the Second Line of Defense Program (DICCE), Richland, WA(2003–Present)
This project involves the engineering and installation of radiological detection equipment at boarder sites and seaports throughout the world. As of May 2012, the project has had employees traveling to 25 countries including Malaysia, Djibouti, Jordan, Bulgaria, Kazakhstan and the Philippines.

Coordinates client, state department, corporate and EHS requirements preparing project personnel for overseas assignment. These activities included training, insurance, medical clearance and travel documentation gathering for both Tetra Tech and U.S.-based subcontractor employees. Produces, maintains and oversees implementation of Project EHS Program Plan and Task Order specific plans. Conducts quarterly audits of field activities as the Project Environmental Safety Manager (PESM) representative and on-site training for local engineering representatives. Provides oversights of the construction (civil and electrical) health & safety aspects of the project including training of the local construction subcontractor, auditing their work in the field and providing project management with recommendations for improvements to safety practices. Acts as both the Project's and Company's lead for medical evacuation and security through the contract Tetra Tech holds with International SOS. This includes continuous monitoring of security issues around the world and frequent interaction with SOS and field personnel to stay up-to-date with changing conditions.

Training Coordinator and ES&H Lead, U.S. DOE Idaho Operations Office, Idaho Spent Nuclear Fuel Dry Storage Facility, Richland, WA (2000–2005)
Responsible for maintaining project training database, modules and matrices in accordance with NQA-1 standards. Wrote, produced and maintained project ES&H orientation training as a Computer Based Training module. Participated as the training coordinator in the ASME certification audit. Performed explosion modeling and toxic chemical air distribution calculations in preparation for the ISF Project's NRC license application. Wrote the Design Criteria Document for the facility's non-radiological air monitoring system.

Industrial Hygienist, Tetra Tech, Richland Office (2007–Present)
Conducted indoor air quality evaluations. Serve as office ergonomics lead for Richland and other TtEC offices. Produced and maintain office emergency plan training for all office personnel as a Computer Based Training module. Actively participate in office EMS committee as the ES&H department representative. Interfaces with building management on office safety issues.

Gerardo Contreras, PE,LEED AP,D.CE,D.PE

Senior Civil Engineer

Mr. Contreras is a Civil Engineer with more than twenty two years of experience. Includes work on several industries across energy, mining, environmental and transportation. Proactive working with new technologies to improve project execution that includes but not limited of the use of 3D design and collaboration environments. Design Experience goes from structural design for vertical buildings, foundations for heavy equipment, piers and seawalls. Construction experience from varies assignments that includes Owner Representative, Field Engineer and Construction Manager. Experience includes work overseas (Venezuela, Spain, Malta, Azerbaijan and Panama). Construction project experience covers a multidisciplinary scope focused on Civil, Electrical and Communications. Extensive field experience covers field assessment of facilities, field inspection for QA/QC, site acceptance and field oversight role. Project engineer highly trained on 3D civil modeling techniques, to simulate and design dredging, disposal sites, beach nourishment, and all surface involved in Coastal projects, breakwater modeling, submerged surface modeling, roads and site development.

Project Role:

Coastal and Civil Engineering

Education:

Executive MBA (PAG), 1999, IESA.

Civil Engineering, 1990, Universidad Central de Venezuela.

Registrations/Certifications:

Professional Engineer, Florida License # 66381

Diplomate on Coastal Engineering #21 and Port Engineering #5 from the Academy Coastal, Ocean, Port and Navigational Engineers ACOPNE

LEED AP

Office:

Stuart, Florida

Years of Experience:

23

Years with Tetra Tech:

12

EXPERIENCE

Construction Manager, Department of Energy NNSA, Spain, Malta, March 2010 – October 2012

Construction Manager Responsible for the construction and installation of Radiation Portal Monitors, ancillary equipment and required infrastructure to operate system to detect and interdict nuclear materials at the Major Ports of Spain and Malta. Scope included equipment foundations, trenching, surface repair, electrical panels and conductors, fiber optic, cameras, OCR systems, network and computer systems.

Civil Engineer, City of Fort Pierce, Fort Pierce City Marina, Fort Pierce, FL, December 2005 – Present

Civil Engineer responsible for concept development of storm mitigation system, such system was retrofit with physical models to determine final 3D model as base for construction drawings. Permit drawings preparation and visualization material to present the case to Regulators for approval. Support the construction management task and engineering support to the City.

Civil Engineer, Port of Port Arthur, Port Arthur, TX, January 2009 – March 2010

Responsible for Master Plan Update; Task includes the Hydrographic review and Berth Occupancy assessment. Lead Civil Engineer on a seawall corrosion evaluation problem and mitigation where underwater Inspection Level I to III were performed to assess the issue.

Civil Engineer, Fall Protection Program – South Florida Water Management District, South

Florida, FL, October 2009 – July 2010
Comprehensive project that includes site visit, risk for fall hazard assessment, recommendations and engineering design retrofit to include fall protection equipment on numerous structures throughout SFWMD flood control system to support operations and maintenance program.

Civil Engineer, Hunters Point Shipyard, Hunters Point, San Francisco, CA, February 2006 – April 2006
Modeling and Design of riprap revetment, to stabilize the shoreline and design of a tidal wetland.

Civil Engineer, Manatee Pocket Navigation and Environmental Restoration Project, Port Salerno, FL, June 2006 – June 2008
Civil Engineer assisting in the dredging design and permitting of Manatee Pocket Navigation Channel. Responsibilities included dredging channel design, volume calculations, the development of a pipeline feasibility study, permit drawings, design of channel marker locations, and production of bid documents.

Civil Engineer, Seaplane Lagoon, Alameda, CA, January 2007 – January 2009
Remedial dredging and dewatering design, to remove radium-contaminated sediments from Seaplane Lagoon at the former Alameda Naval Air Station.

Civil Engineer, Pacific Corp, WY, June 2008 - July 2008
Modeling and civil design for access roads and assembly pad to install wind turbines for Seven Mile High and Rolling Hills windfarms. Design includes vertical and horizontal geometry, road widening analysis for super extra-long trucks and site grading.

Civil Engineer, NAVFAC, Prudhoe Bay, AK Multiple Years 2005-2008
Shoreline erosion monitoring and prediction program for former DEW line station near. Task included Aerial photography orthogonal correction and correlation with topographical surveys to trace historical shoreline.

Civil Engineer, St. Johns River Water Management District, FL May 2005 – September 2005
Feasibility study for the dredging and dredged material disposal/reuse of the Apopka-Beauclair Canal in central Florida. Lake Apopka at the upstream end of the seven-mile canal has been considered one of the most polluted lakes in Florida. It was historically plagued by phosphorus-laden discharges from farms as well as from sewage and industrial discharges. The dredging program seeks to reduce the re-suspension and downstream transport of organic sediments that occur during high canal discharges. The study includes a bathymetric survey of the canal, sediment sampling and laboratory testing, design of a series of dredging and disposal options and estimation of costs.

Richard E. Czlapinski, PE, D. CE

Coastal Engineer

Mr. Richard Czlapinski is a registered professional engineer in Florida and several other states and has 42 years of professional experience in civil and coastal engineering. He has extensive experience in project feasibility and design studies, wave, hydrodynamic, hydrothermal and contaminant transport modeling, dredging and coastal sediment transport investigations.

Mr. Czlapinski is a coastal engineering diplomate with the Academy of Coastal, Ocean, Port, and Navigation Engineers, ACOPNE, and is currently serving as the past-president of the ACOPNE Board of Trustees.

EXPERIENCE

Miami Harbor Deepening Project, Phase III, Great Lakes Dredge and Dock Company (2013-present). Serving on a Project Team working with GLDD as the Prime Contractor (End Client is the US Army Corps of Engineers, Jacksonville District) to conduct environmental management and quality control/quality assurance reviews and reporting to the USACE, Florida Department of Environmental Protection, and federal and state resource agencies of this approximately two-year duration project. Supported artificial reef construction of 9.28 acres of low-relief and high-relief reef comprised of quarry-sourced limestone from Miami-Dade County, as mitigation to offset impacts of channel deepening on coral and hardbottom communities. Reefs will be placed approximately 2.4 miles offshore in water depths of 42 to 45 ft.

Oyster Reef Creation Design and Permitting, Hillsborough Bay, Florida, National Oceanic and Atmospheric Administration (2013-present). Served on the Project Team in support of the design aspects of Phase I of this two-phase project. Performed design analyses of wind, wave, and tidal forcing functions and unit sizing and stability calculations utilized in the design of a stable plan and cross-section configuration of a created oyster reef substrate.

Rock Island Arsenal Landfill Capping, Illinois. U.S. Army Corps of Engineers (USACE), Louisville District. (2012-2013). Water Resources Engineer. Hydrodynamic modeling of 100-year flood flows in a branch of the Mississippi River and the design of bank stabilization to protect an old landfill from erosion exposure during flood conditions.

Joint Base Charleston Landfill Capping, South Carolina. U.S. Army Corps of Engineers (USACE), Omaha District. (2012-2013). Water Resources Engineer. Hydrodynamic modeling of 100-year riverine and coastal surge flooding conditions and the design of scour protection for an old landfill that extends out into the marsh floodplain.

Hurricane Sandy Flood hazard Damage Mitigation, Newark Airport, Port Authority of NY & NJ, 2013. Review of preliminary plans to repair stormwater outfall and channel bank scour damage to a large perimeter drainage ditch at the Airport as part of FEMA hazard damage mitigation program assistance after Hurricane Sandy

Project Role:

Coastal Engineering

Education:

OE, Ocean Engineering professional degree, Massachusetts Institute of Technology, 1975

MS, Ocean Engineering, Massachusetts Institute of Technology, 1975

BCE, Civil Engineering, University of Detroit, 1969

Registrations/Certifications:

Licensed Professional Engineer:

- New Jersey (23886), Earned 2/17/77
- South Carolina (9712), Earned 10/18/83
- North Carolina (12157), Earned 12/13/84
- Florida (42834), Earned 1/10/90
- Hawaii (12608), Earned 8/24/07
- Louisiana (33412), Earned 10/1/07

Active Record Holder with National Council of Examiners for Engineering and Surveying Number 8864, earned 11/15/89

Diplomate, Coastal Engineering, Academy of Coastal Ocean Port and Navigation Engineers, Earned 12/7/09

American Society of Civil Engineers (ASCE)

Coasts, Oceans, Ports, and Rivers Institute (COPRI)

Member of Florida Association of Environmental Professionals

Office:

Boynton Beach, Florida

Years of Experience:

42

Years with Tetra Tech:

13

Heads Creek Reservoir Dredging, Georgia. City of Griffin. (2012-2013). Project consultant on the dredging and dredged material dewatering aspects of the project. Project consisted of a feasibility study for the dredging of the Heads Creek Reservoir to increase the storage capacity of drinking water.

Shoreline Stabilization, Washington, US Navy Facilities Engineering Command, (2011-2012), Design engineer on a design-build project to protect about 1,000 ft of Puget Sound shoreline and an old landfill immediately landward at the Naval Air Station, Whidbey Island. The design incorporated a dynamically stable gravel beach to protect the toe of the revetment. The gravel beach also won favor among Native American Tribe stakeholders due to its value as a spawning area.

Residential Canal Dredging Program, Florida. Hillsborough County. (2009- 2012). Served as a project manager for updating of a Municipal Service Benefit Unit (MSBU) program, dredging feasibility and cost estimation studies, field investigations, public involvement, regulatory permitting, final design, development of MSBU assessment methodology and individual assessment totals, and construction support services in connection with a County-sponsored program to dredge residential canals in qualified communities with salt water residential canals along Tampa Bay.

Jensen Beach Boat Ramp, Florida, **Martin County Department of Parks and Recreation, (2005- 2009),** Project manager for the design and permitting of a recreational boat ramp facility.

Marina Reconstruction, Florida. City of Fort Pierce. (2005-Present). Project manager for the design and permitting and consultant during the construction phase of the replacement and expansion of the City Marina that was destroyed in the hurricanes of 2004. The project involved in coordination with the Federal Emergency Management Agency (FEMA) regarding the hurricane damage to the marina and in the development of a damage mitigation plan to protect the rebuilt marina from future storm wave and current damage. The reconstruction program includes design of about 150 slips on floating docks with full utilities, design of a new bulkhead, design of a system of island breakwaters to protect the marina and the design of shore stabilization at an adjacent city park.

Manatee Pocket Dredging Program, Florida. Martin County. (2005-2012). Project manager for field investigations, design studies, dredged material handling, and regulatory permitting, public participation, grant research and writing, and construction support services for the development of a navigational channel in Manatee Pocket at Stuart, Florida. Tetra Tech contributed the project's qualification for about $10 million of the $13 million construction cost. In October 2010, the Treasure Coast Chapter of the Florida Association of Environmental Professionals gave the project its Project Award for its extensive environmental enhancement.

East End Seaport Environmental Impact Report (EIR), Grand Cayman Island. Hesperities, LLC. (2010-2011. Task manager for coastal engineering support in the preparation of an EIR for the licensing of a new inland deep-water port facility on the southeast coast of Grand Cayman Island. The analyses included numerical hydrodynamic and water quality modeling to evaluate circulation within the 516 acre harbour as well as evaluations on the stability and performance of a 700 foot jetty that extends out into the Caribbean Sea.

Phase II Contamination Assessment, Rhode Island. Naval Facilities Engineering Command. (2011). Water Resources Engineer. Performed CGWAVE modeling at the facility in Narragansett Bay to evaluate the potential for resuspension and transport of contaminated sediments resulting from industrial operations at the Gould Island Industrial Harbor of Naval Station Newport.

Port Arthur Master Plan, Texas. Port Arthur Port Authority. (2009-2009). Water Resources Engineer. Participated in the coastal engineering aspects of updating for the Master Plan including vessel access, waterfront facilities evaluations and recommendations for improvements. A related assignment included the evaluation of accelerated corrosion of a 1,800 foot long segment of steel sheetpile bulkhead and the development and implementation of a project to clean, repair, and protectively coat the sheet piling.

Seaplane Lagoon Contaminated Dredging Project, California. Naval Facilities Engineering Command. (2007). Served as a project consultant and technical reviewer on the design of a remedial dredging and dewatering project to remove radium-contaminated sediments from Seaplane Lagoon at the former Alameda Naval Air Station on San Francisco Bay prior to its turnover to community interests.

TETRA TECH

Stuart E. McGahee PE

Senior Project Engineer

Mr. McGahee has over 19 years of work experience in Florida, Texas and Alaska with 11 years as a Professional Engineer registered in the State of Florida. Experience in the design and permitting of **coastal, civil** and **agricultural** facilities within the jurisdiction of the South Florida Water Management District, St. John's River Water Management District, the US Army Corp of Engineers, the Florida Department of Environmental Protection, the Florida Turnpike Authority, the Florida Department of Transportation and most of the local agencies throughout the treasure coast.

Other work experiences include large scale watershed management, waste and material handling, agricultural equipment and implement design and development, on-farm agricultural operations management, agricultural structures design, placer, lode gold and aggregate mining and mine site reclamation.

Project Role:
Construction Bids And Technical Review

Education:
BS, Agricultural Engineering, University of Florida
MS, Engineering & Science Management, University of Alaska, Fairbanks

Registrations/Certifications:
Florida Professional Engineer No. 57536
Qualified Storm Water Management Inspector
Member of American Society of Agricultural and Biological Engineers

Office:
Stuart, Florida

Years of Experience:
19

Years with Tetra Tech:
4

EXPERIENCE

City of Ft. Pierce
Project Manager, Storm Protection System Marina Reconstruction
Lead office engineer during the final design of the storm protection islands. Project engineer during the construction and installation of the 14-acreas of habitat islands designed to protect the City Marina that was destroyed by Hurricane Francis in 2004. Mr. McGahee is presently serving as the Project Manager for the $10-Million Marina Design-Build project, currently underway. The project is under construction and should be completed near the middle of 2015 weather permitting.

South Florida Water Management District (SFWMD)
Project Manager, Underwater Inspection Program
Perform underwater structural inspections of South Florida Water Management District structures. Project is an annual recurring contract with approximately 50-60 structures selected by District staff. Supporting project engineer during the inspection and reporting portion.

SFWMD
Project Manager, Structure Inspection Program
Regional – District Wide – South Florida
Perform surface and underwater structural inspections of South Florida Water Management District structures. Project was a three-year annually recurring contract with approximately 200 structures selected by District staff. Project manager for the successful completion of all three years of this contract.

SFWMD
Project Manager, Pump Station Modernization, STA Region, South Florida
Project manager during the emergency investigation, design and implementation of modifications needed to add manual-manual operation capabilities to two large District pumps stations. Supervised Tetra Tech staff, mechanical and electrical specialty engineers while they investigated the requirements needed to convert the programmable logic control systems so that they could support manual operations in times of major power outages.

SFWMD – Dispersed Water Storage Study, Stuart, FL

Project engineer assisting with the watershed management considerations associated with the investigation, study and reporting for five large, dispersed water storage project. Goal was to perform suitability and constraint evaluations for each. Project was designed to collect data on properties deemed suitable for the collection and storage of water over large areas in shallow depths.

SFWMD
Project Manager, Fall Protection, Regional – District Wide – South Florida
Project manager for the plan/specification production of fall protection measures for over 60 existing water control structures. Supervised Tetra Tech staff, structural engineers and contractors during the investigation of safety improvements needed at District structures located throughout the region..

Martin County, FL
Project Engineer, Kitching Creek Central Flowway Restoration Project
Responsible for project engineering, quality control and hydrologic modeling review to ensure project purpose and construction schedule are met for this large scale restoration project.

SFWMD
Lemkin Creek Stormwater Improvements Alternatives Analysis, Okeechobee County, FL
As Project Engineer, Mr. McGahee helped develop and analyzed alternatives that provided water quality and quantity benefits to the upstream basin and Lake Okeechobee. The project involved three main steps: (1) designing conceptual alternative descriptions for stakeholder input; (2) developing/determining appropriate methods to analyze water quantity, water quality, and other benefits; (3) conceptually designing three preferred alternatives to just below 30% design; and, (4) applying the analysis methodologies to compare the alternatives equally. The project was heavily reliant upon standard storm water engineering practices and stakeholder input and coordination.

Martin County, FL
SFWMD, Lakeside Ranch Stormwater Treatment Area
Assisted project team members in the identification and risk assessment associated with a Cattle Dipping Vat (CDV) found near the proposed Lakeside Ranch Storm water Treatment Area (STA). Worked with SFWMD and FDEP staff to identify necessary mitigation including the possible redesign of flow ways to accommodate conditions at the site.

TETRA TECH

Ralph Basinski
RCRA Permitting

Mr. Ralph Basinski has over thirty years of professional environmental experience. He has served in various roles and levels of responsibility from technical lead/project manager to facility activity coordinator. He has managed DOD and commercial contracts that required management and coordination of numerous vendors and subcontractors. . Mr. Basinski has experience managing RCRA and CERCLA investigations and remediation activities. He has extensive experience serving in various roles ranging from technical lead, project manager to multi-project coordinator for RCRA Part B permitting and corrective action for sites subject to oversight by various US EPA Regions (III, IV V, and IX) and state agencies (FDEP, DNR, IDEM, IEPA, and CALEPA). Mr. Basinski has prepared RCRAPart B permit application for technical operations, in workplaces requiring strict adherence to safety for chemical, hazardous and radiological protocols and quality assurance compliance in accordance with varying government agencies. He has provided technical oversight and managed projects for RCRA Corrective Action Interim measures preparing government technical specifications and cost estimates, oversight of remedial contractors and preparation of closeout reports.

Technical / Regulatory Compliance Specialist/Lead: Acts as technical lead responsible for determining MRP, RCRA, TSCA, and CERCLA regulatory and technical requirements, developing/providing regulatory/technical directions to project staff and reviewing project deliverables for regulatory/technical content. Has served as technical lead for twelve projects involving RCRA permitting of (Subpart X) open burning and open detonation facilities as miscellaneous units, five container storage facilities, five hazardous waste incinerators, and a disposal surface impoundment. For the Subpart X facilities, the technical direction involved delegating the details of, and approach to establishing environmental performance standards for air, surface and subsurface environments, based on selection of appropriate media standards.

Project Role:

RCRA Permitting

Education:

BS, Chemistry, 1968,

University of Pittsburgh

Registrations/Certifications:

40-Hour OSHA Hazardous Waste Health and Safety Training; 06/1998

Project M4nagement Training Level 1: 02/07

Project Management Training Level 2; 05/07

Office:

Pittsburgh, PA

Years of Experience:

30

Years with Tetra Tech:

28

EXPERIENCE

Project Manager, RCRA RFI Investigations & Reports, SOUTHDIV CLEAN/NSA Crane; Crane, IN; June 1998 to Ongoing ($20,000,000). Serving as project manager for RCRA RFI investigations at 8 SWMUs (02, 04. 05, 08, 09, 10, 15, and 17) located at NSWC Crane where chlorinated solvents, metals, PAHs, SVOCs explosives and PCBs are the primary constituents of concern. The project scopes included preparation of planning documents including field sampling plans (FSP), quality assurance project plans (QAPP), field work, preparation of health and ecological risk assessments, and RFI Reports. Six QAPPs (two including multiple SWMUs) were prepared and each has been approved by U. S EPA Region 5 and IDEM. Field investigations have been completed and the RFI reports have been finalized for all but two of the SWMUs awaiting completion of interim remedial measures.

Project Manager, RCRA Interim Measures Plans, Cost Estimates, Oversight and Reports & Reports, NAVFAC MW/NSA Crane; Crane, IN; December 2008 to Ongoing. Serving various roles as project manager and/or regulatory/technical lead for RCRA Corrective Action Interim measures projects soils remediation projects at NSA Cranes SWMUs 3, 5, 7, 8, 9, 12, 13, 16, 17, 21 23 and 32 and UXOs 5 and 8 located at NSA Crane where metals, chlorinated solvents, PAHs, PCBs and explosives were the primary constituents of concern. Provided regulatory guidance for compliance with RCRA waste management standards for remediation wastes, compliance with TSCA PCB requirements, and Section 401/404 permitting requirements. Interim measures have been completed at SWMUs 5, 8, 9, 12, 13, 16, and 17 (Phase I) and UXOs 5 and 7 with no further actions required for the soils. The interim measures process is ongoing at SWMUs 3,17 (Phase II), 21 and 23. .

Facility Activity Coordinator, 1998 – Present, Naval Support activity (NSA), Crane, Indiana; NAVFAC Midwest; RCRA Investigations/Remediation and Part B Permitting
Mr. Basinski is the Facility Activity Coordinator for Tetra Tech for RCRA corrective action investigation and remediation and Part B permitting projects for NSA Crane under various contracting mechanisms, including CLEAN and Biological Resource Services task order contracts and direct contracts with NSA Crane. In this capacity, he provides technical oversight for project support, quality assurance for all technical and strategy development activities, manages project control activities, and provides continuous improvement suggestions for executing the overall goals of the NSA Crane RCRA Corrective Action/Permitting program. He also interacts with NAVFAC Midwest, IDEM and US EPA Region 5 providing them with requested information and recommendations for project direction. The NSA crane program involves all activities required for the successful performance of RCRA facility and CERCLA remedial investigations; and oversight of corrective and remedial actions at 16 RCRA and CERCLA sites. Responsibilities include regulatory oversight to ensure compliance with RCRA waste management standards applicable to remediation wastes.

Project Manager/Technical Lead; RCRA Subpart X Permit Application for Open Burning/Open Detonation Units; SOUTHDIV CLEAN/Naval Weapons Stations Charleston; Charleston, South Carolina; Served as project manager and technical lead for successful RCRA Subpart X permitting of Naval Weapons Station Charleston OB/OD facilities.. The Part B application included an air dispersion modeling assessment of the ambient air impacts of ambient OB/OD treatment emissions using the INPUFF model. A Baseline Environmental Program and Long-Term Groundwater Monitoring Program meeting the requirements of 40 CFR 264 Subpart F was included in the application. DHEC has approved the air dispersion modeling assessment and Baseline Environmental Monitoring Program, and long-term groundwater monitoring program. The RCRA Part B Permit was issued. A multi-media (soil, sediment, storm water, and surface water) plan was developed. After approval by DHEC the plan was implemented.

Project Manager; RCRA Closure Plan for OB/OD Units: U.S. Army, Sierra Army Depot (SIAD), Herlong, CA; September 2003 to June 2008 ($240,000). Responsible for preparation of conceptual and detailed closure plan for SIAD open burning / open detonation (OB/OD) facilities and California Environmental Quality Act (CEQA) documentation. MEC and MC are the primary concerns of the Closure Plan and CEQA documents. The Closure Plan includes MEC Hazard Assessments. The SIAD OB/OD facilities were the largest in the nation and covered and area over 5,000 acres in size. The conceptual closure plan was developed and submitted to the CA Department of Environmental Protection Department of Environmental Control (DTSC). This plan was used as the basis for development of the detailed closure plan. The draft detailed closure plan was subject to public comment. Comments were received and were addressed. The California EPA has approved the final Closure Plan. Several CERCLA facilities are located within the boundaries of the area that are affected by the closure, MC, and MEC. Hazards present by UXO were addressed in the Closure Plan.

TETRA TECH

Brian Proctor

Senior Project Manager

Mr. Proctor has 18 years of experience in land stewardship, natural resources management, wetland ecosystems, and natural areas restoration with a particular emphasis on restoration planning, permitting and implementation. He currently serves as the Operations Manager for Florida overseeing contract management, project financial performance to schedules, scopes and budgets. He is an experienced project manager for many large and complex projects. He has been the responsible person in charge of designing, permitting, planning, and implementing a diverse array of upland and wetland restoration projects. His experiences included delineation, assessment, and restoration planning and monitoring of inland and coastal resources for both upland and wetland habitats. Mr. Proctor has conducted and overseen numerous large scale qualitative and quantitative flora and fauna surveys to monitor post project success. He has been a lead scientist for preparing and conducting surveys for species listed as endangered, threatened or of special concern including marine turtles, the Florida Beach Mouse, Bald Eagles, Scrub Jays, Red Cockaded Woodpeckers, Manatees, Crested Caracaras, Gopher Tortoises, Wood Storks, and Shore Birds. Additionally, Mr. Proctor served as Aquatic Preserve Manager for the Indian River Lagoon Aquatic Preserve and Buffer Preserve Manager for the North Fork St Lucie Buffer Preserve with the Florida Department of Environmental Protection. While at FDEP studied submerged resources interactions from water quality improvement projects. He was responsible for oversight of the management, planning, and implementation of restoration and enhancement activities on over 160,000 acres of State owned and managed lands. Mr. Proctor was responsible for

Project Role:

Construction Management

Education:

BS, Environmental Policy, University of Maryland, 1993

MS, Environmental Resource Management, Florida Institute of Technology, 1995

Registrations/ Certifications:

Commercial Pesticide Applicator License, State of FL in Natural Areas and Aquatics

Authorized Gopher Tortoise Agent No. GTA-09-00206A

Office:

Stuart, Florida

Years of Experience:

18

Years with Tetra Tech:

6

EXPERIENCE

Project Manager, City of Ft Pierce Island Breakwater Construction Oversight (2013)

Project manager overseeing the construction and implementation of a $20 million dollar island breakwater system in the Indian River Lagoon. The breakwaters consisted of a series of free formed rock islands and a large breakwater island made of rock T-groins and sand. He was responsible for contractor adherence to schedule, scope, budget and quality. As the primary point of contact for the client, Mr. Proctor was responsible for all aspects of project management including assigning proper personnel, personnel management. Oversaw a team of scientists and engineers to confirm that the construction adhered to approved plans and specifications. Performed all required mitigation components including 2.5 acres of seagrass mitigation, 1.5 acres of mangrove creation, 10.5 acres of erosion control blankets and beach dune vegetation installation. Provided baseline and time zero monitoring of all submerged resources and mitigation components.

Project Manager, South Florida Water Management District, FL (2011)

Prepared an analysis of mitigation opportunities for the South Florida Water Management District to be used in conjunction with processing 404 permit applications for the Comprehensive Everglades Restoration Program (CERP). Also responsible for preparation of monitoring plans and reports to support environmental compliance for the permitting section of the CERP Division for self-performed on-site mitigation .

Task Manager, Loxahatchee Mitigation Bank Wood Stork Analysis, FL (2011)

Prepared an analysis documenting the net positive increase in foraging biomass for wood storks following restoration of the Loxahatchee Mitigation Bank as part of an ongoing Mitigation Banking Program at Tetra Tech EC.

Project Manager, South Florida Water Management District – Dispersed Water Storage Study, FL (2010)
Prepared conceptual designs for five large dispersed water management storage projects district-wide. Performed field investigations and prepared report of preliminary designs.

Sr. Scientist, Martin County, Kitching Creek Watershed, FL (2010)
Sr. Scientist assisting with the design and permitting of the Kitching Creek watershed improvements. The projects purpose is to reestablish the historical flow patterns through a 19.9 square mile basin in southern Martin County, Florida and includes the state and federal permitting required to construct the necessary appurtenances needed to regulate flow into and out of this area.

Task Manager Federal Permitting, City of Fort Pierce Marina Reconstruction, St. Lucie County, FL (2009)
Responsible for federal permitting activities for reconstruction of City of Ft Pierce Marina and the creation of 11 Island breakwaters within the Indian River Lagoon. Coordinated with Federal and State Partners including NOAA, NMFS HCD and PRD, EPA, and FWS concerning avoidance and minimization of impacts, proposed mitigation, EFH, critical habitat, and other listed species concerns.

Permitting Task Manager, Loxahatchee Mitigation Bank, Palm Beach County, FL (2009)
Responsible for major permit modifications to the FDEP permit and the Federal Mitigation Banking Instrument (MBI) to operate a wetland mitigation bank. Revised methodology for measuring interim and final success criteria. Coordinated with State and Federal regulatory agencies to negotiate a successful outcome.

Project Manager, Confidential Client, 8-Mile Ranch Mitigation Bank, FL (2009)
Responsible for preparation of a feasibility analysis for a proposed mitigation bank in Florida. Analyzed the feasibility of the overall concept for restoration, credit creation, and market absorption rate, along with the potential permitting challenges.

President, Resource Restoration, Inc. (2003-2006)
Responsible for overall management and operation of a natural areas restoration business performing large scale restoration of wetland and associated upland communities throughout South Florida. Supervised a staff of up to 50 employees including project managers, project superintendents, and field crew to achieve the projects overall goals. Responsible for all financial performance goals of the company.

Environmental Scientist, Multiple Permitting and Compliance Projects, EW Consultants, Inc., FL(2000–2006)
Coordinated and performed field activities in support of the preparation of Environmental Assessments and Impact Statements for projects up to 10,000 acres. Responsible for the preparation of Environmental Assessments and Environmental Impact Statements and ERP applications. Prepared restoration and enhancement plans for upland and wetland habitats to ensure survivability of flora and fauna species listed as endangered, threatened or of special concern.

TETRA TECH

Jesse Davis, PE, M. ASCE

Coastal Engineer

Mr. Davis is a registered professional engineer in Florida with over nine years of experience in coastal engineering. Mr. Davis has a strong background providing both engineering services during construction as well as front-end design and permitting. He has overseen multiple projects from inception to construction; the design and construction of a $19 million dollar island storm protection system, $1.2 million dollars in fall protection retrofits, and 1,500 linear feet of shoreline stabilization. He has a broad range of experience that includes construction phase services, hydrodynamic and numerical modeling; shoreline stabilization, dredging, and marina design; and inspection of breakwaters and water control structures.

Project Role:

Coastal Engineer

Education:

MS, Ocean Engineering, 2005, Florida Institute of Technology

BS, Ocean Engineering, 2004, Florida Institute of Technology

Registrations/Certifications:

Professional Engineer, Florida License Number 70660

Office:

Stuart, Florida

Years of Experience:

9

Years with Tetra Tech:

7

EXPERIENCE

Field Operations Lead/Project Engineer, December 2005 - Present
City of Fort Pierce Marina, Fort Pierce, Florida

Responsible for overseeing project staff to provide the City of Fort Pierce with engineering services during the construction of a $19 million dollar, 13-island breakwater system. Conducts weekly progress meetings with the Contractor and City, reviews and prepares pay applications, processes all RFI's and shop drawing submittals, provides the City with recommendations on contractor change requests, coordinates and performs underwater engineering inspections, issues field orders authorizing minor changes, prepares and issues non-conformance reports, and conducts tailgate safety meetings with project staff. Responsible for the coordination and development of construction plans for the construction of the island breakwater system. Other design responsibilities include developing a surface water model to determine the hydrodynamic changes proposed breakwaters would have on the marina and surrounding waters, turbidity models to assess the potential impacts of dredging and island construction activities may have on adjacent marine resources, stability calculations for tee-groin stabilized island breakwaters, the development of island maintenance and performance plans for the breakwater islands, obtaining permits for a modification to the marina's submerged land lease, and the production of numerous permit drawings. Field responsibilities include conducting piston core borings and surface water sampling within the Indian River Lagoon, visually classifying the cores, and overseeing bench scale tests of Geotubes®.

Coastal Engineer, 2011 – Present
Shoreline Stabilization Design for NAS Whidbey Island (NAVFAC), Washington

Mr. Davis was responsible for the design and development of construction plans and specifications for the stabilization of 1,500 linear feet of eroding shoreline along Ault Field at Naval Air Station Whidbey Island in Puget Sound, WA. Shoreline protection consisted of a dynamic, gravel beach along the foreshore slope; static revetment along the bluff; and natural vegetative stabilization. This project was highlighted as a success story in NAVFAC's Environmental Restoration News, May 2013 edition.

Co-Project Manager/Project Engineer, 2010 – 2012
Design of Fall Protection for Existing Water Control Structures and Engineering Services during Construction, South Florida Water Management District (SFWMD)
Tetra Tech was contracted to provide both design and engineering services during construction for the installation of fall protection equipment at 68 water control structures within the South Florida Water Management District (SFWMD). The construction was broken into 3 phases of approximately 20+/- structures and performed concurrently by 3 separate Contractors. Jesse was responsible for coordinating with the SFWMD project management team, SFWMD construction managers, SFWMD field stations, and multiple contractors to review and process all RFI's, shop drawing submittals, and value engineering proposals, issue field orders, and perform all necessary site visits. During the design phase, he was responsible for developing a 300 page set of plans, specifications, design reports, and cost estimates. Design began in November 2010 with construction finishing in March 2012. SFWMD provided an overall review rating of 4.5 out of 5; with 'exceptional' ratings for staff capability, flexibility, promptness of deliverables, and quality of work completed.

Project Engineer, 2010 – 2012
Structure Inspection Program, South Florida Water Management District (SFWMD)
Project Engineer responsible for performing civil and structural field inspections, data collection, deficiency cataloging, CAD drawing development, and report writing involving over 100 water control structures. The purpose of these inspections was to identify structure deficiencies and generate recommendations for corrective actions to improve structure operation.

Coastal Engineer, 2006 – 2010
Manatee Pocket Dredging Project, Martin County, FL
Coastal Engineer assisting in the dredging design and permitting of the removal of 280,000 cubic yards of material for navigation and environmental enhancement of Manatee Pocket in Martin County, Florida. Responsibilities included dredging channel design, volume calculations, the development of a pipeline feasibility study, performing gopher tortoise surveys, detailed cost estimates, permit drawings, design of channel marker locations, production of bid documents, and review of contractor pay requests.

Field Engineer, 2006 – 2010
Florida Department of Environmental Protection (FDEP), Hazwaste Programs
Supervisor/Environmental Safety Supervisor/GIS mapping design, responsible for implementing expanded site investigation tasks at hazardous waste and drycleaner contaminated sites throughout Florida. Duties also include organizing and implementing field activities in order to delineate contaminated plumes, performing soil and groundwater sampling, and monitoring air quality.

TETRA TECH

Trevor W. Nobile, PG
Environmental Geoscientist

Mr. Nobile is currently designated as a Geoscientist and licensed Professional Geologist in the Stuart, Florida office with over 7 years of experience in conducting environmental site assessments, investigations and various environmental studies. Mr. Nobile is responsible for coordinating and implementing field activities in environmental site assessments, studies, remedial actions, and operation and maintenance activities. Technical experience ranges from soil, sediment, and rock classification to hydrogeologic investigation and monitoring, field engineering, remedial action implementation, field activities and subcontractor supervision, as well as data compilation, analysis, and report writing.

Project Role:
Geology/Hydrogeology

Education:
MA, Geoscience, Florida Atlantic University, 2006

BS, Physical Geography, University of Wisconsin - Stevens Point, 2004

Registrations/ Certifications:
Professional Geologist, Florida License No. 2762

Office:
Stuart, Florida

Years of Experience:
8

Years with Tetra Tech:
7

EXPERIENCE

Florida Department of Environmental Protection (FDEP), FL
Supervising Field Geologist responsible for implementing expanded site investigation tasks at hazardous waste, petroleum, and drycleaner contaminated sites throughout Florida. Responsibilities include organizing and implementing field activities in order to delineate contaminated plumes, performing soil and groundwater sampling, analyzing samples using mobile laboratories and membrane interface probes (MIP), conducting Modified Active Gas Sampling (MAGS) studies, as well as providing oversight during monitoring well installation using a variety of drill rigs, and interpreting and recording soil/sediment lithologies using the Unified Soil Classification System (USCS). Duties also include performing installation supervision, operation, and maintenance on soil vapor extraction and bio-remediation injection system techniques.

South Florida Water Management District (SFWMD), Environmental Risk Assessments, Palm Beach, Martin, and Polk counties, FL
Supervising Field Geologist responsible environmental assessment activities and remedial action planning and implementation. Duties include environmental and geotechnical drilling oversight, soil and sediment classification, groundwater flow mapping, water quality reporting and compaction testing oversight. Site investigation was necessary for the SFWMD in the Comprehensive Everglades Restoration Program (CERP) and great Everglades restoration effort.

South Florida Water Management District, Florida Everglades Ultra-Trace Mercury Study, Multiple Counties, FL
Supervising Field Scientist/Field Lead responsible for sediment classification and characterization, surface water, pore water, algae, and mosquito fish sampling at fixed stations in remote regions of the Florida Everglades managed by the SFWMD. Samples were collected utilizing a dirty-hands-clean-hands collection technique and processed in a nitrogen gas positive environment glove box.

South Florida Water Management District, Water Quality Monitoring, GES and STS Contract, FL
Lead Field Scientist responsible for Water Quality Monitoring throughout the SFWMD's region. Responsibilities include the collection of surface water and groundwater following the SFWMD SOPs, documenting, storing, processing, and shipping/delivering these environmental samples to support water quality monitoring.

Florida Power and Light Company (FPL), St. Lucie Nuclear Power Station, St. Lucie, FL
Lead Field Geologist responsible for remediation and monitoring services within the St. Lucie Nuclear Power Plant. Responsible for organizing and executing subcontractor activities that included drilling and installing monitoring wells, pumping test wells and remediation system installations. Monitoring activities include collecting soil and groundwater samples around the diesel generator storage tanks, turbine lube oil areas and former on-site refueling facility, conducting sampling activities while ensuring nuclear radiation safety procedures were followed when working within the Protected and Radiation Controlled Areas.

United States Army Corps of Engineers (USACOE), Morehead City, Carteret County, NC
Lead Field Geologist assisting in offshore benthic characterization survey and grain size analysis of the Beaufort Inlet ebb tide delta to develop a Dredged Material Management Plan (DMMP). Responsibilities included offshore sediment classification and identification as well as sieving and sorting of material to identify benthic invertebrate species.

United States Army Corps of Engineers , Ft. Myers, Lee County, FL
Field Geologist responsible for sediment classification, characterization, and sampling on the Caloosahatchee River near the Franklin Lock and Dam. Work was completed by using a boat equipped with appropriate sediment coring apparatus, piston core and mini-dredge. The study was conducted to differentiate contamination liability using chemical 'fingerprinting' and tracing constituents of interest.

Cypress Creek Restoration Project, Jupiter Farms, Martin County, FL
Supervising Field Geologist responsible for geotechnical soil lithology classification, sample collection and oversight covering miles of berm/levee for slope stability analysis in site restoration efforts.

Manatee Pocket Project, Stuart, Martin County, FL
Field Scientist responsible for oversight of Vibracore technology to collect sediment cores for laboratory analysis and determining sediment thickness and localized geology in future dredging and restoration efforts.

United States Environmental Protection Agency (USEPA), Washington, DC Headquarters, National Lakes Assessment 2012 in Alabama, Florida, and Georgia
Field Scientist team member responsible for classification of sediment cores, collection of surface water, zooplankton, phytoplankton, benthic invertebrates, and chlorophyll samples and overall lake and shoreline assessment activities to aid in the National Lake Health Study.

TETRA TECH

Amy Stanford
Industrial Hygiene

Ms. Stanford has 29 years of technical and professional experience in all aspects of radiological controls, health physics, and Environmental, Safety, and Health (ESH). Currently serving as a Senior Health Physicist, she provides management, engineering, and consulting services to a range of commercial and government clients. She has worked extensively in all phases of radiological field operations, demolition/decommissioning, hazardous waste remediation, environmental restoration, hazard assessment, regulatory compliance, emergency operations, and training. Ms. Stanford is also qualified in construction safety and industrial hygiene. She has development, implementation, and assessment experience with Radiation Protection and ESH programs for government, industrial, and utility clients.

Project Role:

EHS

Education:

BS, Radiation Protection, 1998, University of N. Alabama and Reg. Equiv.

Registrations/Certifications:

Advanced Mixed Waste Shipper Certification Training – 3/25/2014

OSHA 1910.120 8-Hour HAZWOPER Annual Refresher Training, Tetra Tech – 12/05/2013

OSHA 30-hr General Industry and Construction Safety Training, OSHA – 10/08/2010

OSHA 1910.120 8-Hour HAZWOPER Supervisory Training, DOE – 09/10/1998

OSHA 1910.120 40-Hour HAZWOPER Training, DOE– 08/20/1993

Office:

Aiken, SC

Years of Experience:

29

Years with Tetra Tech:

10

EXPERIENCE

Radiation Safety Officer, February 2011 to Present
Greenfield Environmental Multistate Trust, LLC, Mobile, AL
Ms. Stanford is the Radiation Safety Officer (RSO) for a Radioactive Material License held in the State of Alabama. She is the senior radiological controls manager responsible for all radiological operations at a former Kerr-McGee facility during site remediation. The remediation includes removal, transport, and international shipment of 700,000 tons of iron oxide (IOX) and the dismantling and disposal of process areas used to produce titanium oxide from mineral sands.

Senior Health Physicist, August 2010 to Present
Various Drilling Companies associated with Marcellus Shale Activities in the State of Pennsylvania
Ms. Stanford is the Senior Health Physicist responsible for the development and implementation of radiation safety programs and monitoring techniques to ensure materials from oil drilling meet waste acceptance criteria for final disposition.

Senior Health Physicist, August 2008 to Present
Closure Activities for US Navy NAS Brunswick and NASJRB Willow Grove, ME and PA
Ms. Stanford is the Senior Health Physicist supporting the multi-million dollar radiological investigations at the Naval Air Station Brunswick and Naval Air Stations Joint Reserve Base Willow Grove, which have been closed under the 2005 Base Realignment and Closure (BRAC) Program. She is responsible for authoring historical site assessments and management of site characterization, remediation, and final status surveys.

Senior Health Physicist, April 2010 to Present
EPA START Contract, Multiple Regions
Ms. Stanford is the Senior Health Physicist supporting various regions nationwide under the EPA Superfund Technical Assessment & Response Team (START) Contract. Provides professional support services to EPA On-Scene Coordinators (OSCs) and other federal officials implementing EPA's responsibilities under the national response system, including site assessment, removal action, preparedness/prevention, Brownfields, and remediation.

EHS Manager (Radiological Controls, Industrial Safety, and Industrial Hygiene), May 2006 to Present
Safety Light Corporation/ EPA, Bloomsburg, PA
Ms. Stanford is the Senior Health Physicist and Radiological Controls Manager supporting the multi-million dollar closure of this National Priority List site, which has a history of several commercial processes and waste disposal activities involving radioactive material. She manages site characterization, performs human health and ecological risk assessments, and prepares Remedial Investigation Reports and Feasibility Studies.

Radiological Controls Manager; November 2004 to November 2007
DOE Savannah River Site, Aiken, SC
Ms. Stanford was the Radiological Controls Manager for two projects totaling over $52 million dollars at the Department of Energy's Savannah River Site. The projects included the environmental closure of five high level radioactive waste units and two partially decommissioned facilities with radioactive Principle Threat Source Material in accordance with regulatory standards.

Senior Rad Engineering Specialist, April 1998 to November 2004
WSRC Radiological Protection Services; Savannah River Site; Aiken, SC
Ms. Stanford held a senior staff position for the site Radiological Controls Manager as the site subject matter expert overseeing all subcontracted radiological work at the site.

Health Physics, January 1992 to April 1998
WSRC Radiological Protection Services; Savannah River Site; Aiken, SC
Ms. Stanford held multiple Health Physics positions overseeing radiological work for operations supporting DOE missions.

Health Physics, January 1985 to 1992
Operations, Various US Nuclear Power Plants
Ms. Stanford held multiple Health Physics positions overseeing radiological work during outage and normal operations for pressurized and boiling water reactor facilities.

TETRA TECH

Jayne Bergstrom
Senior Project Manager

Ms. Jayne Bergstrom is a Biologist and Project Manager with Tetra Tech Inc. She has 18 years of experience in environmental management, environmental sciences and wetland ecosystems, with emphasis on regulatory permitting and Florida's sovereign submerged lands issues. She has been responsible for program management and special project initiatives dealing with key regulatory and environmental policy issues.

Project Role:
Environmental Permitting

Education:
B.S. Biological Sciences, Minor in Botany, Florida Atlantic University, 1996

Office:
Boynton Beach, Florida

Experience:
Environmental Resource Permitting
Public Outreach and Facilitation
Estuarine and Marine Ecosystems
Freshwater Wetland Ecology
Wetland Delineation
Wetland Function Assessments
Mitigation
NEPA

Years of Experience:
18

Years with Tetra Tech:
5

EXPERIENCE

City of Ft. Pierce, FL, Marina Design & Permitting; Permitting Lead (2009)

Permitting Task Manager for the replacement and expansion of the City Marina that was destroyed in the hurricanes of 2004. The project involved coordination with the Federal Emergency Management Agency (FEMA) regarding hurricane damage to the marina and development of a damage mitigation plan to protect the rebuilt marina from future storm wave and current damage. The reconstruction program included design of about 150 slips on floating docks with full utilities, design of a new bulkhead, design of a system of "living island breakwaters" to protect the marina and the design of shore stabilization at an adjacent city park. The project won Tetra Tech President's Gold Award in 2010. Obtained USACE and FDEP regulatory permits which included extensive coordination with federal and state agencies for a project involving marina expansion and a waterfront habitat island protection system. Coordinated with Tetra Tech field scientists to implement the water quality and sediment sampling program and a 90-acre benthic habitat survey. Developed the biological habitat plans for the waterfront protection islands. Conducted project UMAM assessment evaluations and documents, and developed comprehensive mitigation plans and documents to offset the project's seagrass impacts.

Martin County, FL, Manatee Pocket Dredging Program; Permitting Lead (2009)

Permitting Task Manager for the development of a navigational channel in Manatee Pocket in Stuart, Florida. Tetra Tech contributed the project's qualification for about $10 million of the $13 million construction cost. Received a Project Award for the single project that provided the most environmental enhancement from the Treasure Coast Chapter of the Florida Association of Environmental Professionals in October, 2010. Obtained U.S. Army Corps of Engineers (USACE) and FDEP regulatory permits associated with a 50 acre dredging project for navigation and environmental enhancements of the Manatee Pocket waterway. A total of 279,293 cubic yards of material was removed and disposed of in accordance with the regulatory permits. Assisted Project Manager with dredging designs relating to key permitting considerations and environmental impacts. Assisted Project Manager with organizing and implementing all of the public outreach activities such as workshops, newsletters and local event participation. Coordinated with Tetra Tech field scientists to implement the water quality and sediment sampling program and analysis of sampling data. Developed plans for seagrass recruitment areas for water quality and benthic community enhancements.

Martin County Parks and Recreation, Jensen Beach Boat Ramp; Permitting Lead (2009)

Served as permitting lead on a county-sponsored project involving the creation of a public boat ramp and associated upland amenities to support recreational needs along the Indian River Lagoon in Jensen Beach, Florida. The project included construction activities both on the uplands and along the shoreline, as well as dredging in adjacent areas that included seagrass beds. This project required extensive regulatory review by local, state and federal agencies, as well as consultation by commenting agencies due to protected species concerns and habitat impacts. By working with the agencies proactively, appropriate avoidance, minimization and ultimately mitigation were addressed in the application process. Because of the innovative mitigation proposal, two separate mitigation plans were needed to address a contingency plan requirement.

Pier 17 Marina Design, Permitting (2006)

Part of the permitting team that support for planning and implementing a streamlined approach to obtain regulatory permits for a mega-yacht facility in South Florida. Regulatory components of the project consisted of obtaining permits to rebuild existing portions of the marina, dredging and disposal of spoil materials in the existing basin, and increasing the facility size by excavating uplands to create more slips for larger vessels.

Florida Department of Environmental Protection Coastal and Aquatic Managed Areas (CAMA) Public Scoping (2007)

Planned and facilitated a series of thirteen workshops throughout the state for the development of CAMA's Aquatic Preserve Program Overview and Aquatic Preserve Management Plans.

South Florida Water Management District. West Palm Beach, FL; (2009- 2014)

During her five-year tenure at the South Florida Water Management District (District), Ms. Bergstrom served as the Director of the Martin/St. Lucie County Service Center; a Section Administrator in the Office of Everglades Policy and Coordination and as a Lead Supervisor in the Bureau of Land Management. As Service Center Director, Ms. Bergstrom served in a senior management role representing District Management in one of eight South Florida Water Management District's Services Centers ensuring all strategies, initiatives, programs, and processes support the agency's core mission of flood control, restoration and water supply. With the Office of Everglades Policy, she held a management role responsible for leading a centralized Everglades Restoration and Capital Projects permitting and compliance group. She was responsible for: obtaining state and federal permits for construction and operation of numerous restoration projects, land management activities, recreation components and capital refurbishment projects for the Central and South Florida Flood Control System; overseeing the compliance of previously permitted restoration projects through construction and operation phases; coordinating with state and federal regulatory agencies regarding National Environmental Protection Act, National Pollutant Discharge Elimination System, Environmental Resource Protection, Everglades Forever Act, Comprehensive Everglades Restoration Project, and Northern Everglades/Lake Okeechobee Protection Act requirements; Performed and supervised threatened and endangered species review and other environmental analyses and biological appraisals. Management responsibilities included setting work plans, guiding and evaluating staff, and ensuring timely, accurate and successful results. Ms. Bergstrom also served in a supervisory-lead role responsible for managing the District's land leasing program and assisting the agency in managing lands acquired for water management purposes or for ecosystem restoration prior to project implementation.

TETRA TECH

Patrick Zuloaga

Lead Scientist/Ecologist

Mr. Zuloaga possesses experience in aquatic ecology including marine, estuarine, and freshwater systems. His professional experience has focused on the management, integration, and performance of habitat restoration, assessment and monitoring, mapping, contamination assessments, remedial designs, expert testimony, and NEPA compliant documents. Mr. Zuloaga has extensive field experience with ecological studies for habitat monitoring, assessment and surveys, wildlife monitoring and surveys, rare / threatened / endangered species surveys, remedial investigations, Stream Condition Index (SCI) calculations, Vegetative Index of Wetland Condition (VIWC) calculations, and sediment characterization. He has served as an expert witness for National Park Service (NPS) and the United States Department of Justice (DOJ) in the capacity of a restoration expert. He has lead field efforts on a variety of large scale restoration projects for clients such as the South Florida Water Management District (SFWMD), National Park Service (NPS), Florida Department of Environmental Protection (FDEP) / Florida Fish and Wildlife Conservation Commission (FWC) / Palm Beach County Environmental Resource Management (PBC ERM) and a variety of private clients. He is responsible for restoration prescriptions and the collection, interpretation, and reporting of ecological and hydrological data from a 1,256-acre mitigation bank. He was also the lead member of an ecological team that assessed and restored coral reef and seagrass habitat in numerous locations throughout South Florida including Biscayne National Park and Everglades National Park. Mr. Zuloaga has experience with writing coral reef and seagrass Restoration Plans (RP), Environmental Assessments (EA), Environmental Impact Statements (EIS), and Programmatic Environmental Impact Statements (PEIS) that meet NPS requirements for NEPA compliance for Biscayne National Park and Everglades National Park.

Project Role:

Habitat Assessment

Education:

BS, Organismic Biology, Ecology, Florida Atlantic University, 2000
Continuing Education, University of Florida, 2004-Present

Registrations/Certifications:

PADI, Advanced Open Water Diver, Aquaventure Dive Center, May 1993

Office:

Stuart, Florida

Years of Experience:

9

Years with Tetra Tech:

7

EXPERIENCE

Task Manager, Benthic Characterization Report, Aguirre Offshore Gasport and Pipeline Project, Puerto Rico (2012)
Responsible for preparing a Benthic Resource Characterization report to support the Federal Energy Regulation Commission (FERC) application for an Offshore Liquid Natural Gasport Terminal (Gasport) and associated gas pipeline for connection to an existing upland power plant in Aguirre, Puerto Rico. The regulatory approvals needed include state, local and federal agencies as well as FERC. The project crosses the Jobos Bay National Estuary Research Reserve and has potential impact on marine and estuarine habitats.

Project Manager, National Park Service, Biscayne National Park Service – Seagrass Restoration, Homestead, FL (2010)
The goal of this project is to draft a seagrass restoration plan / programmatic environmental impact statement (RP/PEIS) that Biscayne National Park can use to both assess restoration needs and determine appropriate restoration actions in seagrass injury sites. Responsible for technical and the affected environment section of the draft RP/PEIS. This document was completed and adopted by NPS as a technical white paper.

Project Manager, National Park Service, Biscayne National Park, Restoration Plans/Environmental Assessments for the Allie B and Igloo Moon Coral Reef Injury Sites, Homestead, FL (2004)
Assisting in the development of two NEPA compliant Restoration Plan/Environmental Assessments (RP/EAs) addressing two coral reef injury sites in Biscayne National Park. Specific responsibilities include preparing text sections of the documents which will lead the Parks restoration activities; client interface; and participate in field efforts to evaluate the current site conditions and develop restoration options.

Ecologist, South Florida Water Management District (SFWMD), Loxahatchee Mitigation Bank, Delray Beach, FL (2002-Present)
Responsible for restoration prescriptions, ecological monitoring of exotic and native plants and animals, wetlands functional value assessments, threatened and endangered species surveys, and document preparation to support permit compliance and mitigation bank credit release for a 1,256-acre fresh water wetland mitigation bank in Palm Beach County. Performs extensive field efforts including monitoring and characterization of site, establishing vegetation and wildlife sampling stations, and water level monitoring. Ecological monitoring program to determine restoration success includes use of drift fences for sampling of reptiles, amphibians, and small mammals, minnow traps for macroinvertebrates and fish, time-area counts for birds, use of line intercept method for collecting vegetative data. Coordinates with engineers and leads the field activities of the hydrological monitoring program. Wetland restoration success involves the restoration of an Everglades mosaic system in an area dominated by exotic and inappropriate vegetation. Annual monitoring report preparation for state and federal permit compliance.

National Park Service, Biscayne National Park, Coral Reef Habitat Restoration, Homestead, FL
Project manager responsible for performing and directing restoration activities, coordination with NPS to ensure agreement with project objectives and restoration methods, and compliance with NPS regulations. Restoration actions include coral reattachment, rubble stabilization, sponge mediated rubble stabilization, and bottom-paint removal.

Applied Technologies and Management, Hardbottom Monitoring for Juno Beach Renourishment Project, Juno Beach, FL
Responsibilities for hardbottom monitoring in the dredge borrow area included coordination with the client and Palm Beach County to ensure agreement with project objectives, monitoring methods, and data collection techniques; compliance with state and local agencies to ensure compliance with regulatory permits; and implementation of the monitoring plan. Specific activities included initial establishment of the monitoring stations and biweekly data collection to monitor any dredging impacts to the hardbottom community.

Vessel Grounding (confidential case), United States Department of Justice, Washington D.C.
Responsibilities include conducting a site assessment for development of restoration prescription and cost estimate for restoration implementation at a vessel grounding site. Responsible for drafting an expert report and testifying in support of the case.

Florida Power & Light, Fish Surveys at Turkey Point Nuclear Plant, Homestead, FL
In support of a Combined Operating License (COLA) Application for proposed new nuclear units at Turkey Point Nuclear Plant, conducted surveys of fish in on-site cooling canals, mangrove wetlands, and drainage ditches. Goals of surveys were to gather baseline data to support environmental impact assessment and determine if any sensitive fish species were present. Of particular interest was the mangrove rivulus, *Rivulus marmoratus*, a state species of concern that is found in mangrove wetlands in the region. Responsible for implementing surveys, collecting written and photographic documentation of sampling activities and data, and ensuring proper handling and processing of all fish captured.

TETRA TECH

Lisa Canty
Ecologist

Ms. Canty possesses 11 years of experience in coastal ecosystems and freshwater wetlands. Her professional experience has focused on the management of natural resources including habitat assessments, restoration, and monitoring. Ms. Canty is proficient at performing impact assessments and surveys of environmentally sensitive areas, including coral reef and seagrass habitat, and presenting the results for preservation or restoration planning. Her current responsibilities include the collection, interpretation, and reporting of ecological and hydrological data from a 1,256-acre mitigation bank, as well as performing with several ecological teams to restore coral reef and seagrass habitat in numerous locations throughout Biscayne and Everglades National Parks. She is a current member of the Reef Environmental Education Foundation (REEF) Advanced Assessment Team (AAT) with field experience conducting reef fish, coral, and marine algae surveys in Southeast Florida and Hawaii. She has incorporated regulatory support to her skill set through interaction with federal, state, and local agencies on behalf of clients in need of obtaining permits.

Role on Project:
Habitat Assessment

Education:
BS, Marine Science, University of Hawaii 2001

Registrations/ Certifications:
PADI, Advanced Open Water

American Academy of Underwater Sciences, Scientific Diver

FWC Licensed Gopher Tortoise Agent, 2011

Professional Affiliations:
Florida Association of Environmental Professionals

Office:
Jackosnville, Florida

Years of Experience:
11

Years with Tetra Tech:
8

EXPERIENCE

Lead Botanist/Ecologist, USEPA National Wetlands Condition Assessment, USEPA (2011)
Project designed as part of EPA National Aquatic Resource Survey to assess the biological, chemical, and physical conditions of wetlands throughout the country. Responsibilities included performing lead botanist role for sampling sites throughout Florida. Site activities included locating the NWCA POINT and establishing the Assessment Area, collecting vegetation data and plant specimens, collecting data for the USA-RAM Assessment Area Metrics. Pressing of plant specimens, plant specimen tracking, keying and identification of unknown species, drying plant specimens, and shipping specimens to appropriate herbaria was performed at the conclusion of field activities.

Biologist, National Park Service, Biscayne National Park Service – Seagrass Restoration, Homestead, FL (2010)
The goal of this project is to draft a seagrass restoration plan / programmatic environmental impact statement (RP/PEIS) that Biscayne National Park can use to both assess restoration needs and determine appropriate restoration actions in seagrass injury sites. Responsible for technical and the affected environment section of the draft RP/PEIS. This document was completed and adopted by NPS as a technical white paper.

Biologist, National Park Service, Biscayne National Park, Restoration Plans/Environmental Assessments for the Allie B and Igloo Moon Coral Reef Injury Sites, Homestead, FL (2004)
Assisting in the development of two NEPA compliant Restoration Plan/Environmental Assessments (RP/EAs) addressing two coral reef injury sites in Biscayne National Park. Specific responsibilities include preparing text sections of the documents which will lead the Parks restoration activities; client interface; and participate in field efforts to evaluate the current site conditions and develop restoration options.

Biologist, South Florida Water Management District (SFWMD), Loxahatchee Mitigation Bank, Delray Beach, FL (2006-Present)
Responsible for ecological monitoring of exotic and native plants and animals, wetlands functional value assessments, threatened and endangered species surveys, and document preparation to support permit compliance and mitigation bank credit release for a 1,256-acre mitigation bank in Palm Beach County. Perform extensive field efforts including monitoring and characterization of site, establishing vegetation

sampling stations, and water level monitoring. Ecological monitoring program to determine restoration success includes use of line intercept and quadrat methods for collecting vegetative data. Coordinates with engineers and performs field activities associated with the hydrological monitoring program.

Biologist/Field Operations Lead, South Florida Water Management District (SFWMD), Everglades Restoration and Capitol Projects (ERCP) Program, FL (2010-2011)
This project was developed in support of the South Florida Water Management District (SFWMD) Everglades Restoration and Capitol Projects (ERCP) program Permitting and Compliance Section. The SFWMD was granted authorization to construct a new stormwater treatment area (STA) called the Lakeside Ranch STA (Lakeside Ranch). To mitigate impacts to 47.88 acres of wetlands associated with the construction of Lakeside Ranch Phase 1, on-site preservation of the "central corridor" and off-site restoration of several isolated wetlands is being performed. Restoration activities include exotic vegetation removal and hydropattern improvements to promote and enhance native vegetation and community structure. Specific activities performed in support of this project include UMAM assessment and collecting ecological data (vegetation diversity and percent cover estimates, photographic and written documentation of wetland conditions, including hydrologic conditions and wildlife utilization, and installation and subsequent monitoring of piezometers) and report preparation.

Biologist, City of Ft Pierce, Fort Pierce City Marina Benthic Resource Survey and Seagrass Monitoring, Indian River Lagoon, Ft. Pierce, FL (2011)
Project involved mapping seagrasses and benthic resources within approximately 100 acres of submerged lands. Specific responsibilities included collecting telemetric data in the field, post-processing data, creating GIS maps of submerged resource coverage, and report preparation.

Biologist, National Park Service, Everglades National Park, Natural Resource Damage Assessments at Five Vessel Grounding Sites in the Florida Keys (2010-2011)
Responsibilities for the assessment of injuries to this mixed seagrass/coral community included coordination with EVER staff to ensure agreement with project objectives and assessment methods, performance of a site visit to collect data on current site conditions, and preparation and implementation of an Assessment Plan. Specific assessment activities included determination and subsequent mapping of the injury area using a portable remote diver-directed device housing a Trimble® DGPS. The collected data were transmitted back to the work platform via telemetry; data were captured and processed using Hypack® software.

Biologist, City of Riviera Beach, Seagrass and Water Quality Monitoring, Lake Worth Lagoon, Riviera Beach, FL (2010-Present)
Responsibilities for implementing the project objectives along a narrow shoal in the Lake Worth Lagoon include collecting seagrass coverage and water quality data, photographic documentation, drafting Seagrass Monitoring Reports, and creating maps of submerged resource coverage. Specific responsibilities include coordination with the client to ensure agreement with project objectives, monitoring methods, and data collection techniques; compliance with state and local agencies to ensure compliance with regulatory permits; and implementation of the monitoring plan.

TETRA TECH

Dawn McCullough
Environmental Scientist

Ms. McCullough has two and a half years of experience have been attained in the position of Assistant Environmental Scientist. Experience has included vegetation and hydrology monitoring, well sampling, construction oversight, environmental permitting, quality control and assurance, data query and analysis, and structure inspection oversight.

EXPERIENCE

New York State Homes and Community Renewal (HCR), NY
As Environmental Analyst, conducted Tier 2 reviews using ArcGIS mapping for the proposed actions for disaster recovery activities to be undertaken in New York addressing damage caused by Hurricane Sandy. Tier 2 checklists were completed in compliance with state and federal regulatory agencies.

New Hampshire Transmission SeaLink Project Geophysical Survey, Seabrook, NH
Over 250 hours of marine mammal observation responsibilities for survey activities conducted for the proposed development of the SeaLink Project. The development of the SeaLink Project is a new, interstate, submarine transmission cable from a proposed converter terminal on the Seabrook Station property to the Mystic substation in Everett, MA.

City of Ft. Pierce, Fort Pierce City Marina Reconstruction, Ft. Pierce, FL
Providing oversight as Environmental Scientist for the construction of storm protection islands: material management; documentation, quality control and assurance. Daily monitoring of material deliveries in accordance with QA/QC project requirements.

Data Query, South Florida Water Management District, West Palm Beach, FL
As Environmental Scientist, conducted data query tasks for storm water treatment areas to include water depth tables, nutrient load parameters, inflow and outflow queries, and radar based rainfall queries.

Aguirre Offshore Gasport Project, Jobos Bay, Puerto Rico
As an Environmental Scientist, provided topside data entry during baseline benthic characterization studies: Hypack software, data entry, dive logs, and field notes; marine mammal observer. Excelerate Energy L.P. is proposing to develop, construct, and operate the Project to be located approximately 3 miles offshore of the Central Aguirre Power Plant (Aguirre Plant). The Project is being developed in cooperation with the request of the Puerto Rico Electric Power Authority (PREPA) for the

Project Role:
Permitting Support

Education:
MS, Coastal Zone Management, 2013, Nova Southeastern University

BS, Interdisciplinary Studies and Environmental Studies, 2009, University of Central Florida

Certificate (Graduate), Coastal Studies, 2010, Nova Southeastern University

Registrations/Certifications:
HAZWOPER Certified

SCUBA Diver Certification

Marine Mammal Observer, 2012

UF, Soil and Water Science Department, Hydric Soils, 2013

Office:
Stuart, Florida

Years of Experience:
3

Years with Tetra Tech:
3

purpose of receiving and storing liquefied natural gas (LNG), regasifying the LNG, and delivering natural gas to the existing Aguirre Plant.

South Florida Water Management District, Structure Inspection Program, West Palm Beach, FL
The purpose of the Structure Inspection Program was to aid the District in identification of structure deficiencies and generate recommendations for corrective actions to improve structure operation. Responsibilities as Environmental Scientist include weekly oversight of structure inspections for over 50 water control structures. Responsibilities also include reviewing and management of video recordings associated with individual inspections.

Loxahatchee Wetlands Mitigation Bank, Boynton Beach, FL
Performed field work at the Loxahatchee Wetlands Mitigation Bank Project. Data collection includes water level monitoring at designated monitoring points throughout the 2,200-acre site.

South Florida Water Management District, Fall Protection for Existing Structures, West Palm Beach, FL
Assisted in Phase I site inspections and oversight for the SFWMD's Fall Protection for Existing Structures in Homestead and Ft. Lauderdale. SFWMD structures include pump stations, control buildings, and a boat lock. Inspections include proper locations and installation of ladder ports, d-bolt anchors, removable d-bolt anchors, cored davit sleeves, face-mount sleeves. Also attended training for project implementation.

South Florida Water Management District, C-111 Canal Plugging Restoration Project, Florida Everglades
Experience includes field work performed at C-111 Canal Plugging Restoration project. Data collection includes line-intercept vegetation monitoring as well as hydrologic monitoring data collection.

TETRA TECH

Chuck Bryan, E.I.T.

Environmental Engineering

Mr. Bryan has 29 years of professional experience in studying, designing, and implementing solutions to hazardous, radioactive, and mixed waste problems. Mr. Bryan currently serves as an Environmental Engineer and Project Manager at Tetra Tech, Inc., in the Aiken, South Carolina office. Mr. Bryan has managed numerous environmental investigation and remediation projects under both the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Recourse Conservation and Recovery Act (RCRA); performed hazardous and radioactive waste site corrective measures studies; evaluated pollution prevention programs, waste minimization processes, and radioactive waste treatment facilities; reviewed and prepared environmental impact statements (EISs); performed and managed Environmental Baseline Surveys (EBSs); and designed and operated groundwater treatment systems. Mr. Bryan has interpreted, implemented, and evaluated Federal, State, and local environmental regulations that have an impact on a wide range of industrial processes. Mr. Bryan has supported a wide variety of waste management and environmental protection projects under the U.S. Department of Energy Savannah River Operations Office (DOE-SR) Technical Support, the Comprehensive Long-Term Environmental Action Navy (CLEAN), and the U.S. Environmental Protection Agency (EPA) Technical Enforcement Support (TES) contracts. These projects include managing a combined budget of over $20 million and a multi-disciplinary technical staff of more than 24 people.

Project Role:

Environmental Engineer

Education:

BS, Chemical Engineering, 1984, University of California at Santa Barbara

Registrations/Certifications:

Engineer-In-Training, California, Certificate No. XE063632, 1985

40-Hour OSHA Hazardous Waste Health and Safety Training; 06/1997

8-hour OSHA Hazardous Waste Health and Safety Annual Refresher Training; current

Office:

Aiken, SC

Years of Experience:

29

Years with Tetra Tech:

24

EXPERIENCE

Project Manager, July 2013 – Present
Private Mining Industry Clients, Vance County, North Carolina
Mr. Bryan serves as the Project Manager for the $750 thousand soil remediation project at a closed mine facility in Vance County, North Carolina. Mr. Bryan provides technical project support for project-level staff, assigns resources to required activities, manages monthly project control activities, and provides continuous improvement suggestions for executing the project. Mr. Bryan also interacts with his clients, providing them with requested information and recommendations for project direction. This project includes the use of an innovative liquid chemical reagent to immobilize metals in soil. This chemical treatment bonds the metals in a crystalline form to provide both physical and chemical immobilization – thus eliminating the need for pH stabilization (which is commonly used in powdered chemical treatments). Mr. Bryan effectively uses computer software (GIS, Adobe Acrobat, Primavera, MS Office Suite, etc.) to optimize project efficiency and provide his clients with information that allows them to make decisions that management within their respective organizations will support.

Project Manager and Engineer, November 1995 – January 2010
U.S. Department of Defense, Naval Air Station, Key West, Florida
Mr. Bryan served as Project Manager and Lead Engineer for the $20 million RCRA, CERCLA, and Petroleum Program investigations at the Naval Air Station (NAS) in Key West, Florida. Mr. Bryan provides technical project support for project-level staff, assigns resources to required activities, manages monthly project control activities, and provides continuous improvement suggestions for executing the project. Mr. Bryan also interacts with Naval Facilities Engineering Command (NAVFAC) Southeast (SE), NAVFAC Atlantic, and NAS Key West customers, providing them with requested information and recommendations for project direction. The NAS Key West project involves all activities required for the successful the performance of RCRA facility and CERCLA remedial investigations; corrective measures and feasibility studies; and oversight of corrective and remedial actions at 15 RCRA and CERCLA sites. The project also covers complete site remediation support at 10 BRAC properties that rapidly progressed from the site inspection (SI) to decision document phases in a little over two years; remediation at 14 Munitions Response Program sites; and the restoration of 24 Underground Storage Tank (UST) sites at NAS Key West. Specific activities include updating the project schedule, reviewing actual expenses against budgets, preparing cost and schedule variance reports as appropriate, preparing cost estimates, reviewing overseeing project

data management, coordinating and evaluating laboratory data, reviewing environmental reports, overseeing field activities, providing technical direction to analytical laboratories, and making presentations to the public and regulatory communities. Mr. Bryan has accumulated extensive experience in dealing with the U.S. Environmental Protection Agency (EPA) in Region IV and the Florida Department of Protection (FDEP) environmental regulatory agencies. Mr. Bryan has successfully obtained regulatory "buy-in" to the Navy's proposals for site investigation and remediation activities (NAS Key West now has over 50 sites where No Further Action has been approved by the regulators); actively participated in Partnering Team and Restoration Advisory Board meetings, which represents the decision-makers for EPA, FDEP, the Navy and the community.

Assistant Project Manager and Engineer, July 2006 – July 2007
Arizona Public Services Company, Palo Verde Nuclear Generating Station, Maricopa County, Arizona
This project involved collecting data on environmental characteristics and plant systems, analyzing the impacts of license renewal on the environment and the local economy, and preparing an Environmental Report that will be used by the Nuclear Regulatory Commission in its license renewal decision. The Assistant Project Manager was required to be cognizant of issues ranging from ecology to socioeconomics to accident analysis. Mr. Bryan also participated in staff interviews to determine new and significant information needed for inclusion in the LR-ER. Mr. Bryan drafted portions of the report and provided management-level reviews of the text prior to submitting the LR-ER to APS for review and comment.

Chemical Engineer, May 1992 – December 1996
U.S. Department of Energy, Savannah River Site, South Carolina
Mr. Bryan provided technical support to U.S. Department of Energy (DOE)-Savannah River (SR) personnel under contract to the High-Level Waste (HLW) and Environment, Science and Technology (EST) organizations by assisting with the development of a pollution prevention program plan for the Savannah River Site (SRS), evaluating potential treatment technologies, performing on-site assessments, and providing technical assistance to DOE-SR personnel. Mr. Bryan authored a pollution prevention program plan to consolidate pollution prevention activities under a central DOE-SR authority, resulting in a comprehensive pollution prevention program. Mr. Bryan conducted an in-depth, site-wide assessment of the contractors' implementation of Affirmative Procurement, which is a specific element of the SRS pollution prevention program. Mr. Bryan evaluated treatment technologies and processes to help DOE-SR remove and vitrify radioactive isotopes that were stored in high-level waste tanks at SRS. Mr. Bryan reviewed and suggested improvements for several high-level waste processes including In-Tank Precipitation (ITP), Extended Sludge Processing (ESP), filter cleaning and backwash, evaporation of dilute aqueous waste streams, and vitrification of high-level waste. Mr. Bryan also developed a Primavera schedule to assist DOE-SR with its oversight activities related to starting up the Defense Waste Processing Facility (DWPF) at SRS. Mr. Bryan provided technical engineering assistance in the preparation of the DOE-SR Waste Management EIS by evaluating numerous processes that generate hazardous, mixed, and radioactive waste. Mr. Bryan assisted DOE-SR with its implementation of the Environmental Restoration Program by evaluating numerous technical documents including work plans, schedules, remedial investigation reports, feasibility studies, risk assessments, proposed plans, and records of decision (RODs).

Chemical Engineer, July 1995 – December 1995
U.S. Department of Defense, Eaker Air Force Base, Arkansas
Mr. Bryan supported investigation-derived waste (IDW) management issues for the U.S. Air Force (USAF) at the Eaker Air Force Base (AFB) in Arkansas. Mr. Bryan managed the storage, consolidation, and disposal of over 500 drums containing soil and groundwater with various levels of contamination. Mr. Bryan used analytical and field data to determine which drums contained uncontaminated IDW that could be safely disposed on base. In addition, IDW contaminated by fuel was treated on base using innovative bio-cell treatment, thus saving the USAF over $20,000 in waste disposal costs. The remaining IDW was consolidated for disposal in the most cost-effective manner at approved disposal facilities.

Appendix B
Forms and Addendum

ANTI-KICKBACK AFFIDAVIT

STATE OF FLORIDA)
: SS
COUNTY OF MARTIN)

I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: _____

Sworn and subscribed before me this

7 Day of July, 2014.

Thomas Malone
NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 5/19/17

THOMAS MALONE
MY COMMISSION # EE 867206
EXPIRES: May 19, 2017
Bonded Thru Notary Public Underwriters

SWORN STATEMENT UNDER SECTION 287.133(3)(a)
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICE AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Bid, Bid or Contract No. RFQ No. 14-004 for Environmental Engineering Services

2. This sworn statement is submitted by Tetra Tech, Inc.
(Name of entity submitting sworn statement)

whose business address is

759 South Federal Highway, Suite 314, Stuart, FL 34994 _____ and (if applicable) its Federal Employer Identification Number (FEIN) is 95-4148514 _____ (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.)

3. My name is Brian Proctor _____ and my relationship to
(Please print name of individual signing)

the entity named above is Southeast Operations Manager _____

4. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to **and directly related to the transaction** of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any Bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means

   1. A predecessor or successor of a person convicted of a public entity crime: or

   2. An entity under the control of any natural person who is active in the management oft entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1)(8), Florida Statutes, means any natural

person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which Bids or applies to Bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

_There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

_The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the fmal order.)

_The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of Environmental Services.)

(Signature)

5/19/14
(Date)

STATE OF FLORIDA

COUNTY OF MARTIN

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

BRIAN PROCTOR who, after first being sworn by me, affixed his/her signature in the
(Name of individual signing)

space provided above on this 7 day of JULY, 2014.

My commission expires: 5/19/17
NOTARY PUBLIC

THOMAS MALONE
MY COMMISSION # EE 867206
EXPIRES: May 19, 2017
Bonded Thru Notary Public Underwriters

EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

STATE OF FLORIDA)
: SS
COUNTY OF MARTIN)

I, the undersigned hereby duly sworn, depose and say that the firm of TETRA TECH, INC. provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses per City of Key West Ordinance Sec. 2-799.

By: _____

Sworn and subscribed before me this

7 Day of JULY , 2014.

_____
NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 5/19/17

THOMAS MALONE
MY COMMISSION # EE 867206
EXPIRES: May 19, 2017
Bonded Thru Notary Public Underwriters

CONE OF SILENCE AFFIDAVIT

STATE OF FLORIDA)
: SS
COUNTY OF MARTIN)

I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of TETRA TECH, INC. have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).

Sworn and subscribed before me this

7 Day of JULY , 2014.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 5/19/17

THOMAS MALONE
MY COMMISSION # EE 867206
EXPIRES: May 19, 2017
Bonded Thru Notary Public Underwriters

CITY OF KEY WEST
3126 Flagler Avenue
Key West, FL 33040

ADDENDUM NO. 1 – RFQ Environmental Engineering/ ITB 14-004

This addendum is issued as supplemental information to the bid package for clarification of certain matters of both a general and a technical nature. The referenced bid package is hereby addended in accordance with the following items:

RFI Questions Submitted:

1.) Does the bid require that respondents be a licensed PE?

Yes, you should include a Licensed PE on your team.

2.) Can a Prime submit as a sub to another firm? Also, can a sub-contractor submit with more than one firm?

Yes.

3.) Please confirm the attached (46 pages) is the complete PDF for the subject submittal. Page 1 of the PDF states that the document is 47 pages in length. It also states that the "Request for Qualifications" section is 10 pages in length. However, per the attached, the section is 8 pages. I just want to be sure there are no missing pages.

Yes there are 46 pages and there are only 8 pages in the RFQ section.

4.) Under the "Scope of Work" section on page 7 of the RFQ, services from a Resident Project Representative would be required. Would a RPR differ from the Engineer of Record in this instance?

Yes, the RPR is the on-site staff providing daily (or other agreed on frequency) oversight (e.g., inspection)

5.) May firms only submit for one discipline or would a sub-consultant be needed to satisfy all service requirements per submission?

Must submit for all, using a sub-consultant as necessary.

6.) Will there be any page number limitations for any part of the qualification package?

Unless otherwise so stated in the RFQ, no limit

7.) Is there an incumbent? If so, can you provide the company name?

There is not an "incumbent" relative to an Environmental-specific General Services RFQ.

8.) Just to clarify the RFQ instructions, please advise: Put COPY Response and CD-ROM in envelope, seal it, mark it COPY and place inside of Envelope with ORIGINAL Response and CD-ROM, then seal that envelope? One envelope inside of another, correct?

Correct.

9.) Signed certifications are required by prime and subs, or just prime?

Just prime

10.) Please confirm that the required forms (Anti-Kickback Affidavit, Public Entity Crimes Certification, Equal Benefits for Domestic Partners Affidavit, and Cone of Silence Affidavit) are to be completed by the prime consultant only.

Correct.

11.) Are insurance certificates required to be provided at the time qualifications packages are submitted?

Yes

12.) Is a "description of the contractor's employee benefits plan" (page 17 of the RFQ) required to be included with the executed Equal Benefits for Domestic Partners Affidavit?

No

13.) Please confirm that electronic signatures are acceptable as originals.

Electronic signatures are acceptable

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

	TETRA TECH, INC
Signature	Name of Business

Appendix C
Professional Licenses

State of Florida

Board of Professional Engineers

Attests that

Tetra Tech, Inc

FBPE

FLORIDA BOARD OF PROFESSIONAL ENGINEERS

is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2015

Audit No: 228201502135

Certificate of Authorization

CA Lic. No: 2429

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL GEOLOGISTS (850) 487-1395
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

TETRA TECH INC
3475 E FOOTHILL BOULEVARD
PASADENA CA 91107

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto **www.myfloridalicense.com**. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!

STATE OF FLORIDA AC# 6230970
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

GB311 07/27/12 128020293

GEOLOGY BUSINESS
TETRA TECH INC

IS CERTIFIED under the provisions of Ch.492 FS
Expiration date: JUL 31, 2014 L12072701604

DETACH HERE

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AC# 6230970

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS

SEQ# L12072701604

DATE	BATCH NUMBER	LICENSE NBR
07/27/2012	128020293	GB311

The GEOLOGY BUSINESS
Named below IS CERTIFIED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2014

TETRA TECH INC
3475 E FOOTHILL BOULEVARD
PASADENA CA 91107

RICK SCOTT
GOVERNOR

KEN LAWSON
SECRETARY

DISPLAY AS REQUIRED BY LAW

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS

LICENSE NUMBER
PG1487

The PROFESSIONAL GEOLOGIST
Named below IS LICENSED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2016

MCGOVERN, JOHN PATRICK
863 SUMMERWOOD DRIVE
JUPITER FL 33458

ISSUED: 06/10/2014

DISPLAY AS REQUIRED BY LAW

SEQ # L1406100001814

State of Florida

Board of Professional Engineers

Attests that

Rebecca Stevens Serra, P.E.

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201511104

P.E. Lic. No: 35624

State of Florida

Board of Professional Engineers

Attests that

Jesse W. Davis, P.E.

FBPE

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201510614

P.E. Lic. No:

70660

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL GEOLOGISTS
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

(850) 487-1395

NOBILE, TREVOR WADE
2085 SE BISBEE STREET
PORT SAINT LUCIE FL 34952

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto **www.myfloridalicense.com**. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

PG2762 ISSUED: 05/12/2014

PROFESSIONAL GEOLOGIST
NOBILE, TREVOR WADE

IS LICENSED under the provisions of Ch.492 FS.
Expiration date : JUL 31, 2016 L1405120001120

DETACH HERE

RICK SCOTT, GOVERNOR KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS

LICENSE NUMBER	
PG2762	

The PROFESSIONAL GEOLOGIST
Named below IS LICENSED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2016

NOBILE, TREVOR WADE
2085 SE BISBEE STREET
PORT SAINT LUCIE FL 34952

ISSUED: 05/12/2014 DISPLAY AS REQUIRED BY LAW SEQ # L1405120001120

State of Florida

Board of Professional Engineers

Attests that

Michael Robert Barnett, P.E.

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201509638

P.E. Lic. No: 44625

State of Florida

Board of Professional Engineers

Attests that

Gerardo Contreras, P.E.

FBPE

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201501573

P.E. Lic. No:

66381

State of Florida

Board of Professional Engineers

Attests that

Richard Edward Czlapinski, P.E.

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201503158

P.E. Lic. No:

42834

State of Florida

Board of Professional Engineers

Attests that

Stuart E. McGahee, P.E.

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201519144

P.E. Lic. No: 57536

State of Florida

Board of Professional Engineers

Attests that

Michael Owen Jaynes, P.E.

FBPE

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015

Audit No: 228201513652

P.E. Lic. No:
55441

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C# 6198696

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS

SEQ# L12071102961

DATE	BATCH NUMBER	LICENSE NBR
07/11/2012	128006787	PG1180

The PROFESSIONAL GEOLOGIST
Named below IS LICENSED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2014

WALKER, GERALD A
7866 MCCLURE DRIVE
TALLAHASSEE FL 323125039

RICK SCOTT
GOVERNOR

DISPLAY AS REQUIRED BY LAW

KEN LAWSON
SECRETARY

2:46:30 PM 5/7/2013

Licensee Details

Licensee Information

Name:	**ROOF, GREGORY S (Primary Name)**
	(DBA Name)
Main Address:	**1204 S CAMPANIA COURT** **ST AUGUSTINE Florida 32092**
County:	**ST. JOHNS**
License Mailing:	
LicenseLocation:	

License Information

License Type:	**Professional Engineer**
Rank:	**Prof Engineer**
License Number:	**50842**
Status:	**Current,Active**
Licensure Date:	**08/05/1996**
Expires:	**02/28/2015**

Special Qualifications	Qualification Effective
Mechanical	**08/05/1996**

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View License Complaint

1940 North Monroe Street, Tallahassee FL 32399 :: Email: **Customer Contact Center** :: Customer Contact Center: 850.487.1395

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